



**DOGGER BANK
TEESSIDE A & B**

**March
2014**

Environmental Statement Chapter 6 Appendix E Onshore Converter Station Sites Identification and Characterisation

Application Reference: 6.6.5



Dogger Bank Teesside Projects

Onshore Converter Station Sites Identification and Characterisation

Forewind

07 October 2011

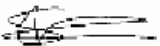

Report

9W7904

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Document title Dogger Bank Teesside Package
Onshore Converter Station Study Area
Characterisation
Document short title Teesside Converter Station Study
Status Report
Date 07 October 2011
Project name Dogger Bank Teesside Package
Project number 9W7904
Client Forewind
Reference 9W7904/CTR23/304119/Lond

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Date/initials approval 

SUMMARY

This report describes the first stage of activities undertaken to date to identify an onshore converter station site(s) in the Teesside Area of North Yorkshire for the Dogger Bank Teesside work Package. A defined study area has been characterised by a variety of development considerations which has resulted in the identification of multiple potential locations for the siting of the new onshore converter station(s).

The sites identified will be used as the starting point for further surveying, consultation and assessment to aid the identification of a final site(s) for the converter station(s).

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1 INTRODUCTION

1.1 Background

The Dogger Bank Offshore Wind Farm has a capacity of up to 13GW, and it is envisaged that up to 4GW will be connected to the National Grid in the Teesside area. The onshore & offshore studies for the combined 4GW are referred to as the 'Teesside Package'. It is not currently known if the Teesside Package will be developed in stages, and if so what these stages would comprise of in terms of capacity. It is expected that the first 2GW (Projects 2 and 3) would connect to Lackenby Substation and that the second 2GW (Projects 5 and 6) would connect to Tod Point Substation. Projects 1 and 4 are part of the Creyke Beck work package. It is currently anticipated the Tod Point Substation will be closed and upgraded. The site for the new Tod Point Substation is yet to be decided on by National Grid.

1.2 Design and Technical Considerations

At least one new converter station site will be required to convert the High Voltage Direct Current (HVDC) export power to High Voltage Alternating Current (HVAC) prior to connection to the national electricity transmission network. For the purpose of this initial study, an approximate 1GW converter station footprint of 4.5ha has been used, based upon initial ABB/Siemens technical drawings for the electrical apparatus only. In addition, the site could be required to contain associated buildings, access roads, construction compounds and environmental mitigation measures e.g. landscaping to reduce any visual impacts.

The selection process has only considered sites of 3.5ha or greater given that this is the minimum requirement for one 500MW converter station. It should be noted that if two 500MW converter stations are to be located side by side on the same site a minimum space of 4.5ha will be required. Therefore, an absolute minimum size of 3.5ha has been considered within the site selection process.

1.3 Study Area

A broad study area has been identified as the Teesside Onshore Cable Route Study Area (in which it is envisaged that the cable route and converter station will eventually be sited). This is shown in **Figure 1.1**; within this, a smaller study area has been defined (solid redline boundary) specifically for the new onshore converter station(s), referred to hereafter as the 'study area' (central grid reference: NZ 560 456).

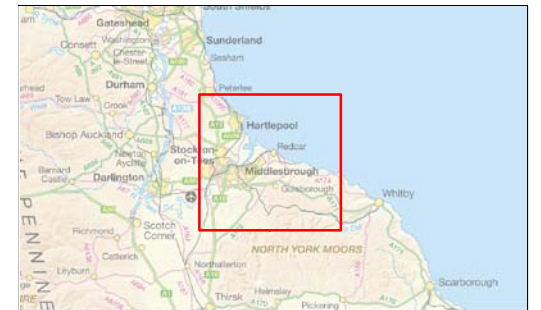
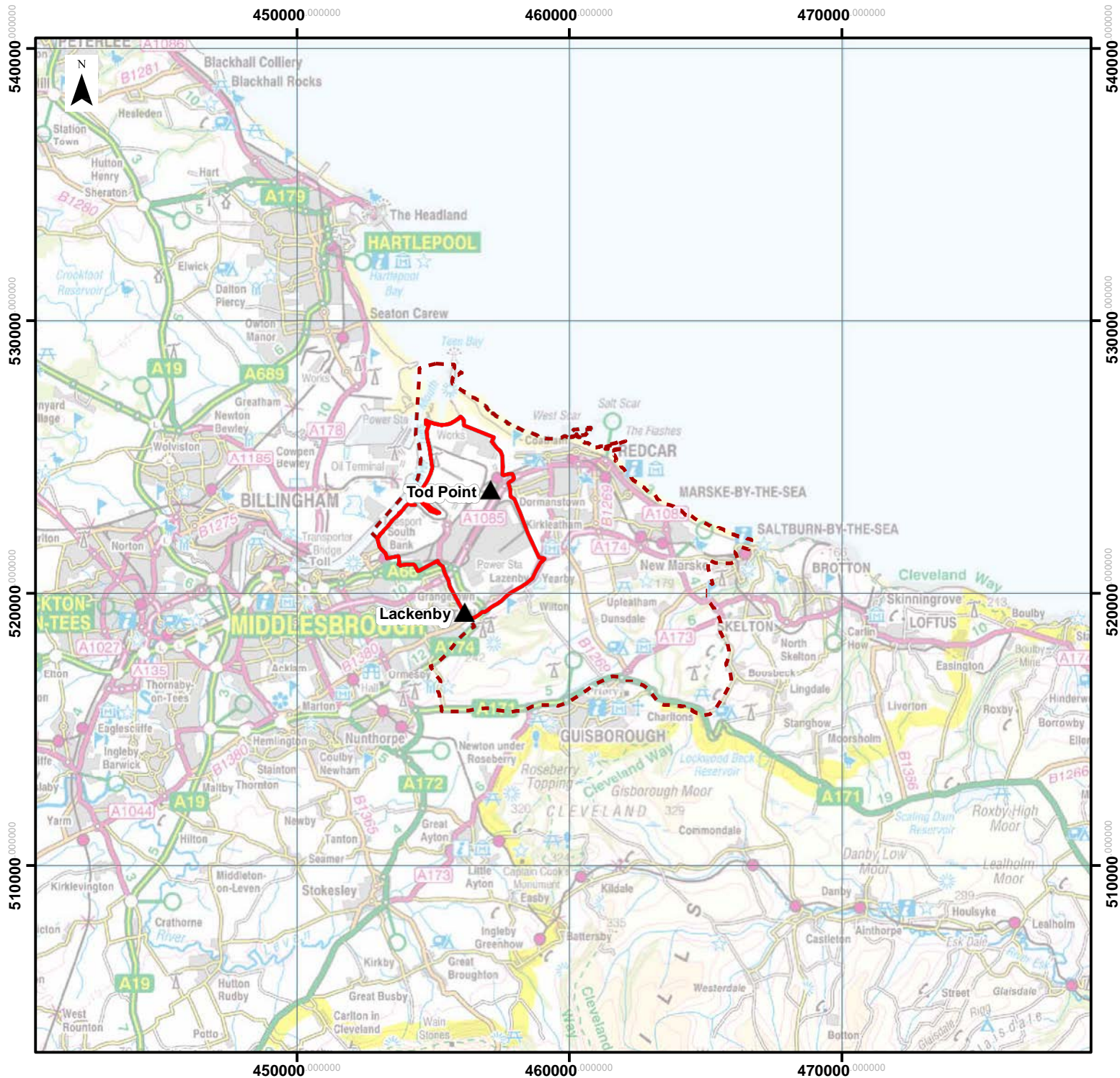
The study area is located south of the River Tees, between Redcar and Middlesbrough. The area stretches from Redcar in the north, Grangetown in the west, the small town of Wilton in the south and Kirkleatham in the east. There is a preference for sites in close proximity to the existing National Grid Substations at Tod Point and Lackenby (See **Figure 1.1**) where the connections to the national electricity transmission network will be made. The study area was selected based on the preference for utilising a site within an existing industrial landscape. This was to minimise impacts on the surrounding communities and landscape. It also reduces the proliferation of industrial development outside the current industrial zones of the Wilton Complex and the Tata Steel works.

1.4 Purpose

The purpose of this report is to describe the activities undertaken to date in the search for potential converter station sites in Teesside. It describes the methodology used to

identify potential converter station sites within the study area based on the development considerations identified. This report and its findings are to be read in parallel with other associated Teesside work package reports in respect of the onshore cable route identification, landfall studies and near shore cable route identification.

The findings contained within this report are intended to provide a basis for further detailed investigations in a number of areas, as recommended below. Its ultimate purpose is to assist in the search for suitable converter station sites.



Legend

- ▲ National Grid Substations
- ▭ Converter Station Study Area
- - - Onshore Cable Route Study Area

Source: Ordnance Survey OpenData © Ordnance Survey
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National Grid Substations © National Grid 2011

0 2.5 5
Kilometres

PROJECT TITLE **DOGGER BANK R3 DEVELOPMENT**
Onshore Cable Route Characterisation Study

DRAWING TITLE
Figure 1.1: Converter Station Study Area

REV	DATE	REMARKS	Dm. By	Ckd. By
0	07/09/2011	Original	JPB	RH

DRAWING NUMBER:
9W7904/CRSAC/1.1/00

SCALE	1:200,000	PLOT SIZE	A4	DATUM	OSGB	PROJECTION	BNG
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2 METHODOLOGY

2.1 Approach

An iterative assessment process has been undertaken; this has included the following steps:

1. Desk-top review of existing data and gap analysis;
2. Purchase and collation of additional data sets;
3. Review of planning policy documentation;
4. Review of environmental and planning documents for surrounding developments;
5. A Geographical Information System (GIS) aided study to characterise the development considerations present within the study area;
6. Identification of suitable converter station sites; and
7. Assessment of the relative development considerations at each of these chosen sites.

2.2 Data sources

A variety of data sources have been utilised to inform the work undertaken. The majority of the international and national data sets were sourced from the earlier Zone Characterisation (ZoC) studies, undertaken as part of the Zone Appraisal and Planning (ZAP) work (Forewind, 2010).

In addition to the national and international datasets, a number of regional and local datasets have been sourced from a variety of organisations. All datasets have been combined and analysed using GIS software. **Table 1.1** summarises the datasets obtained and the data providers.

Table 1.1: Datasets and Providers

Data Provider	Datasets
Existing data review	
Zone Characterisation (ZoC) Report (Forewind)	<p><i>Utilities:</i> existing substations, grid connections, national grid gas pipes, overhead cables, airfields.</p> <p><i>Designated sites:</i> Special Area of Conservation, Special Protection Areas, Ramsar sites, Special Sites of Scientific Interest, National Nature Reserves, Local Nature Reserves; Country Parks, National Parks, RSPB reserves, Areas of Outstanding Natural Beauty, Heritage Coasts.</p> <p><i>Habitats:</i> Ancient Woodlands</p> <p><i>Archaeological designations:</i> World Heritage Sites Scheduled Ancient Monuments, Battlefields, Listed Buildings, Registered Parks and Gardens.</p> <p><i>Hydrology and hydrogeology:</i> Lakes, rivers</p> <p><i>Infrastructure/Land Use:</i> built up areas, roads, schools, hospitals, railways.</p> <p><i>Geology:</i> 1:625,000 bedrock and superficial geology</p>
Technical Information from Forewind, Siemens	<p>Relevant technical advice supplied in relation to the initial ZAP process.</p> <p>Dalcour Maclaren: technical figure identifying areas for potential</p>

Data Provider	Datasets
and Dalcour Maclaren	converter station sites based on a review of publically available information about the landowners/management companies Siemens/ABB: technical figure displaying converter station dimensions
Data collection	
Find Mapping and Data Consultancy	Water abstractions, detailed river line, nodes and offline drainage, groundwater vulnerability mapping, waste and landfill sites, and 1:50,000 geology mapping
Natural England	Agricultural Land Classification
Tees Archaeology	Historic Environment Records for Redcar & Cleveland
North East Environmental Records Information Centre (ERIC)	Records within a 1km buffer zone around the study area of: Local Wildlife Sites (LWS); UK Biodiversity Action Plan (BAP) habitats; and notable and protected species records
Bing Maps	Aerial photography
Redcar & Cleveland Borough Council	Development Plan Documents, Strategic Flood Risk Assessment; Flood Zone Maps
Various sources	Relevant Environmental Statements, committee reports/decision notices/appeal decisions.

3 PLANNING POLICY FRAMEWORK

3.1 National Planning Policy

The Planning Act (2008) makes provision for the Government to produce National Policy Statements (NPS). These establish the national need for a particular type of major infrastructure, together with a series of criteria relating to the benefits and impacts of a development, which the Infrastructure Planning Commission (IPC) will consider when making recommendations in relation to a Nationally Significant Infrastructure Project (NSIP) application.

The aims of the NPS are to:

- Integrate environmental, social and economic objectives, including climate change commitments, for the delivery of sustainable development;
- Set out the national need for infrastructure development and set the policy framework for IPC decisions; and
- Provide a major step towards to the overall goal of speeding up the process of delivering infrastructure.

There are three NPS that hold particular relevance for offshore wind and its associated onshore development:

- Overarching NPS for Energy (EN-1, July 2011) (Department of Energy and Climate Change (DECC)), 2011a);
- NPS for Renewable Energy Infrastructure (EN-3, July 2011) (DECC, 2011b); and
- NPS for Electricity Networks Infrastructure (EN-5, July 2011) (DECC 2011c).

The overarching NPS sets out the Government's policy for delivery of major energy infrastructure and is part of a suite of Energy NPS that were formally designated by the

Secretary of State for Energy and Climate Change on 19th July 2011, having been debated and approved by the House of Commons the previous day.

3.2 Planning Policy Statements

In July 2011 the Department for Communities and Local Government (DCLG) issued a consultation draft for a new National Planning Policy Framework (NPPF) which sets out the Government's economic, environmental and social planning policies for England in a radical streamlining intended to replace the existing system of Planning Policy Statements (PPS) and Planning Policy Guidance Notes (PPG). The NPPF, once adopted, will promote sustainable, economic growth and jobs, providing a framework for provision of infrastructure which underpins the economy, including progressive decarbonisation of the energy generation and distribution system.

Paragraph 4.1.5 of EN-1 makes it clear that PPSs and PPGs have been taken into account in the preparation of the NPS. There is specific consideration given in EN-1, EN-3 and EN-5 to all the of relevant subject areas covered by PPSs and PPGs (flood risk, cultural heritage, national landscape designations etc.) and it is only the policies in the NPSs which are to be considered.

However, whilst the NPS form the main policy documents, the existing PPS are considered to still provide important information for the IPC in some circumstances. EN-3 states that the IPC should have regard to the existing planning guidance relevant to renewables (Paragraph 2.2.1). Therefore, for completeness, the key renewables PPS 22 (Renewable Energy) will be of material consideration.

3.3 Regional and Local Planning Policy

In addition to the new overarching NPSs, Paragraph 4.1.5 of EN-1 makes it clear that Development Plan policies may be regarded by the IPC as relevant and important in its decision making, but that where its policies conflict with an NPS, the NPS is to prevail.

The following plans and policy documents currently form the regional, county and local planning policy framework:

- The North East England Regional Spatial Strategy (RSS) (July 2008);
- Redcar and Cleveland Borough Council (RCBC) Local Development Framework (LDF) currently containing:
 - Core Strategy Development Plan Document (DPD) Adoption (2007);
 - Development Policies DPD (2007); and
 - Adopted Proposals Map.
- Redcar and Cleveland Local Plan (saved policies) (1999).

RCBC is in the process of adopting the LDF and it is anticipated that it will be fully adopted by 2013. The LDF will consist of a variety of Development Plan Documents (DPDs), Supplementary Planning Documents along with the Sustainability Appraisal, Statement of Community Involvement and the Local Development Scheme.

The relevant adopted LDF documents currently comprise of the following DPDs: the Adopted Proposals Map; Core Strategy DPD Adoption (2007) and the Development Policies DPD (2007). The policies in these documents have been adopted, along with saved policies from the Local Plan (1999), which will only be revoked once the LDF is adopted in full.

3.4 Planning Policies

This section outlines the national, regional and local policy categories relevant to the development of the converter station(s) as taken from the relevant documents as outlined above. They have been broadly grouped into the categories shown in **Table 3.1**

Table 3.1: Planning Policy

Policy Category	Policy Purpose
<i>Renewable Energy</i>	In terms of renewable energy policy the development is supported at the national, regional and local planning policy levels.
<i>Nature Conservation and Ecology</i>	The planning policy with regard to nature conservation and ecology focuses on the protection of designated sites, protected species and notable habitats, including Biodiversity Action Plan (BAP) habitats.
<i>Archaeology and Cultural Heritage</i>	Planning policy supports the protection of archaeology and cultural heritage features at all levels of planning policy.
<i>Landscape</i>	Planning policies regarding the protection of landscape seek to avoid development within designated areas and to protect, maintain and enhance the existing landscape character and important views.
<i>Hydrogeology and Flood Risk</i>	Hydrogeology and flood risk planning policies seek to safeguard water resources and prevent development in areas of flood risk as well as preventing any increase in flood risk to existing developments.
<i>General Environmental</i>	In addition to the specific topics outlined above, there are a number of policies in relation to; development within rural areas, sustainable development, agriculture, waste and settlements. Wherever possible, the development will need to be in accordance with these policies. Any issues will be addressed through the EIA process which will include the topics of land use, agriculture, air quality, noise and vibration and tourism. It is considered that these matters can be addressed through careful site selection, design and construction methodologies and will ensure that the project is in alignment with planning policy in these areas.

Each of these policy areas are considered in a national and local context in further detail and specifically in relation to the siting of the converter station(s) in **Table 5.1**.

4 REVIEW OF PREVIOUS ENVIRONMENTAL STATEMENTS

4.1 Other Development in the Teesside Area

An initial review of recent major infrastructure developments within the study area has identified the following key documents that can provide further information on the development considerations within the study area:

- EDF, Teesside Offshore Wind Farm (Environmental Statement, March 2004, Entec UK Ltd);

- PD Teesport, Northern Gateway Container Terminal (Environmental Statement, April 2006, Royal Haskoning);
- MGT, Tees Renewable Energy Plant (Environmental Statement, July 2008, PB Power);
- PD Teesport, QEII Berth Development (Environmental Statement, March 2009, Royal Haskoning);
- ASDA Teesside Wind Power Project (Planning Statement, November 2009, Green Peninsular); and
- RWE, Breagh Pipeline Project (Environmental Statement, February 2010, Envest).

The above reports provide information on environmental baseline, assessments, consultations, mitigation and planning conditions within the study area. At the present stage of the converter station assessment, due to the complexity of the developments and their diverse spatial and temporal parameters, it is difficult to fully assess these projects in the context of a large number of potential converter station sites. However the environmental information available within these Environmental Statements (ES) will be invaluable in progressing the second stage of the assessment and the subsequent ES for the preferred site(s). **Figure 5.1** provides the location of the above projects in relation to the study area.

The existing Wilton International chemical complex (see **Figure 5.4**) has also identified areas that are available for development (<http://www.wiltoninternational.co.uk/>). The site locations identified by Wilton International have been considered during the site selection process.

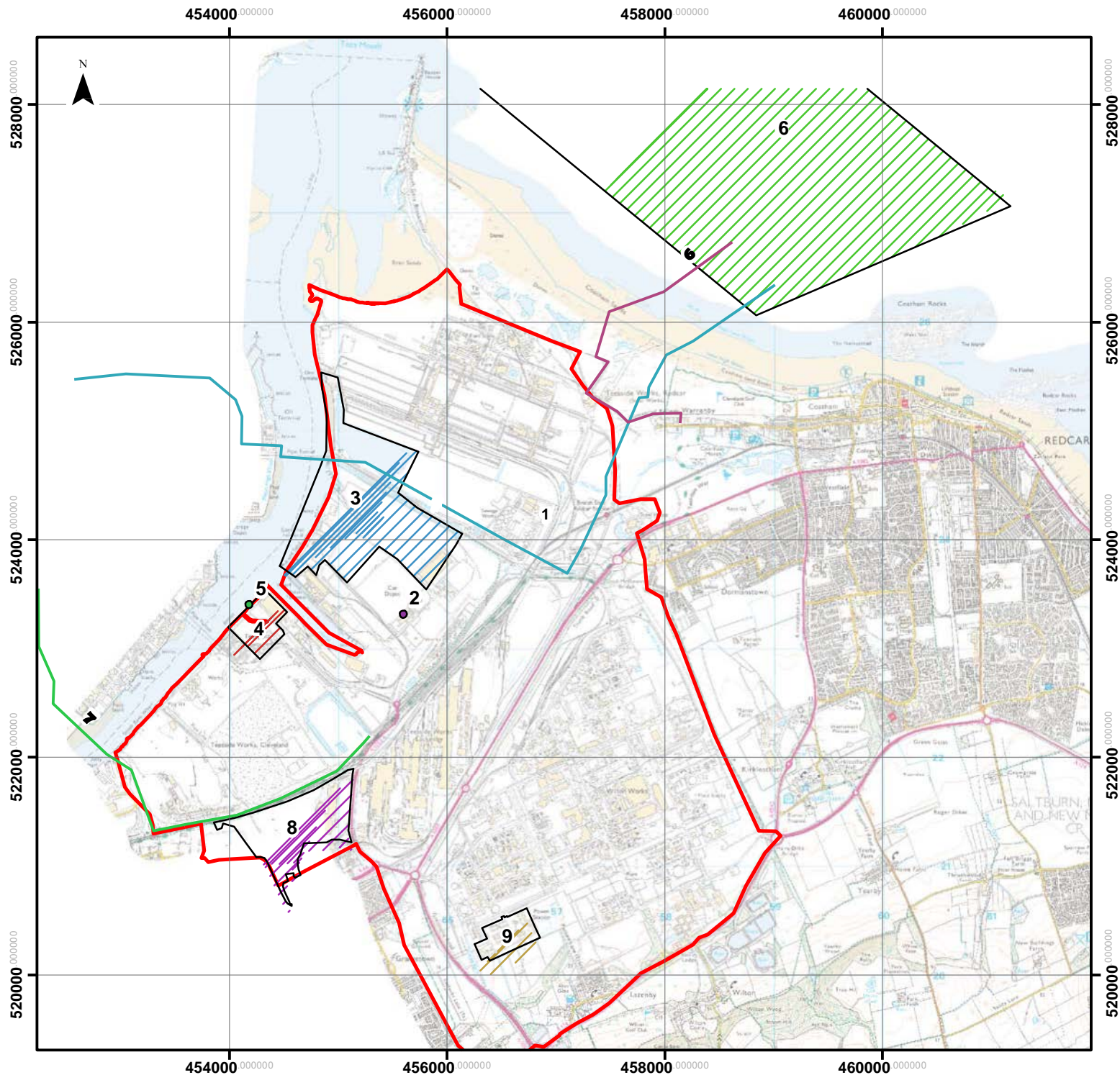
5 SITE SELECTION AND ASSESSMENT

5.1 Overview of Study Area

The study area is approximately 2,255 hectares and is located between the western edge of Redcar and the east side of Middlesbrough. Grangetown is adjacent to the eastern boundary of the study area and Kirkleatham is just outside the western boundary. The study area is bound by the River Tees to the north and the A174 to the south, near the town of Wilton.

The predominant land use within the study area is industrial, comprised of Sahaviriya Steel Teesside (formerly Tata Steel and Corus), Wilton International chemical complex and Teesport Docks. The latter complex is the second largest UK port in terms of annual tonnage handled (RCBC).

The study area is bisected by three A-roads and a number of railway lines. A single school (Wilton Primary school) is within Lazenby. There are numerous archaeological records within the study area but no statutory designated sites are located within the study area boundary.

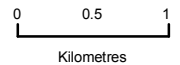


Legend

 Converter Station Study Area

Key Proposed Projects

- 1 Breagh Pipeline Project
- 2 Asda Wind Turbine Project
- 3 Northern Gateway Container Terminal
- 4 Tees Renewable Energy Plant
- 5 QEII Berth Development
- 6 Teesside Offshore Wind Farm and Export Cable
- 7 National Grid Cable
- 8 South Tees Eco Park
- 9 Teesside Power Station



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PROJECT TITLE **DOGGER BANK R3 DEVELOPMENT**
Onshore Converter Station Study Area Characterisation

DRAWING TITLE

Figure 5.1: Key Projects

REV	DATE	REMARKS	Dm. By	Ckd. By
0	31/08/2011	Original	JPB	RH

DRAWING NUMBER: **9W7904/CSSAC/5.1/00**

SCALE	1:50,000	PLOT SIZE	A4	DATUM	OSGB	PROJECTION	BNG
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5.2 Key Development Considerations Identified

All the data received has been mapped and analysed in GIS. Key considerations have been identified that will inform the site selection process. A 1km buffer zone has been employed around the study area to ensure that all sensitive receptors either inside or adjacent to the study area are identified. Where the buffer extended into the sea the shoreline was used as the buffer extent. **Table 5.1** outlines each consideration and describes the potential impact of these on the siting of the converter station (i.e. Increased consenting effort (and risk), increased consultation effort and, technical and/or financial challenges during installation and operation). **Figures 5.2 to 5.13** show the development considerations present within the study area and are referred to in the right-hand column of **Table 5.1**.

Table 5.1. Key considerations for site selection process

Consideration	Details	Details for site selection compliance with Planning Policy	Figure number
<i>Nature Conservation Designations -</i>	<p>Statutory designated sites</p> <p>Study area</p> <p>There are no statutory designated sites located within the study area.</p> <p>1km buffer zone</p> <p>There are seven statutory designated sites within the 1km buffer zone around the study area. There are no Special Areas of Conservation within the 1km buffer zone.</p> <p>The Teesmouth and Cleveland Coast Ramsar site is located immediately adjacent to the northern boundary of the study area. The area encompasses a range of habitats (sand and Intertidal Mudflats, rocky shore, saltmarsh, freshwater marsh and sand dunes), which support internationally important populations of waterbirds. The site is also designated as a Special Protection Area (SPA).</p> <p>There are five nationally designated sites within the 1km buffer zone. The closest is the South Gare & Coatham Sands Site of Special Scientific Interest (SSSI), is located immediately adjacent to the study area boundary. The site is designated for its flora, invertebrate fauna and birdlife and is located immediately adjacent to the north-east boundary of the study area.</p> <p>The Tees and Hartlepool Foreshore and Wetlands SSSI is approximately 340m west of the study area at its closest point. This site comprises several coastal areas which are an integral part of the complex of wetlands, estuarine and maritime sites supporting the internationally important population of wildfowl and waders on the Tees Estuary.</p> <p>Seaton Dunes and Common SSSI is approximately 670m north west of the</p>	<p>In order to comply with nature conservation and ecology policies, all impacts on designated sites should be avoided wherever possible. Where direct impacts cannot be avoided, they should be minimised via the Environmental Impact Assessment (EIA) process through careful design and the use of mitigation measures to further reduce any adverse impacts.</p> <p>There are no designated sites within the study area boundary. There are seven statutory designated sites within the 1km buffer zone around the study area that could be indirectly affected by the proposed works. Should any impacts be anticipated, they would be minimised wherever possible.</p>	5.2

Consideration	Details	Details for site selection compliance with Planning Policy	Figure number
	<p>study area at its closest point. The site is designated for its flora, invertebrate fauna and bird life. The site is also designated as a Local Nature Reserve (LNR).</p> <p>Seal Sands SSSI is approximately 800m west from the study area at its closest point and has important mudflats which attract large numbers of migratory wildfowl and wading birds, especially during the winter months.</p> <p>The Seaton Dunes and Common SSSI and Seal Sands SSSI comprise the Teesmouth National Nature Reserve (NNR). It is a coastal site with a range of habitats including intertidal mud and sand flats, sand dune systems, saltmarsh and grazing marsh.</p> <p>All the SSSIs and NNR within the study buffer zone form part of the Teesmouth and Cleveland Coast SPA and Ramsar site.</p> <p>No Country Parks or National Parks were found within the study area.</p> <p>Non-statutory designated sites</p> <p>Study area</p> <p>No Local Wildlife Sites (LWS) were found within the study area. Coatham Marsh Wildlife Trust Nature Reserve extends into the north east of the study area.</p> <p>1km buffer zone</p> <p>Coatham Marsh LWS is present within the north east edge of the 1km buffer zone. Wilton Woods Complex LWS and Eston Woods LWS are present in the south eastern edge of the 1km buffer zone.</p> <p>The Teesmouth and Cleveland Coast is also an RSPB Important Bird Area (IBA).</p>		
<i>Valuable habitats</i>	Study area	The presence of notable habitats should be	5.3

Consideration	Details	Details for site selection compliance with Planning Policy	Figure number
	<p>North East Environmental Records Information Centre (ERIC) provided a number of locations of United Kingdom Biodiversity Action Plan (UKBAP) priority habitat types within the study area classified as 'Intertidal Mudflats' and 'Deciduous Woodland'. The Intertidal Mudflats are spaced intermittently along the eastern edge of the study area and adjacent to the River Tees; on the edge of the industrial estate.</p> <p>A small area of deciduous woodland was found north-east of Lazenby, running along the north side of the A174 and along the west side of Southgate Road. Woodland continues to extend east along the north side of the A174, past a business park. The area of woodland east of the business park and extending up to the roundabout where the A174, Southway and A1042 meet is also highlighted as Deciduous Woodland.</p> <p>There are other areas of woodland (exact type unknown) along the south eastern boundary of the study area and a long, narrow band follows the A1085 across the middle of the study area.</p> <p>1km buffer zone</p> <p>In the north east of the buffer zone, immediately adjacent to the study area boundary, there is a band of Reedbed UKBAP priority habitat and Coastal Sand Dune UKBAP priority habitat. In the south, Deciduous Woodland is present along with an area of ancient woodland, 630m from the study area boundary. A small area of upland heath is also present in the southern area of the buffer zone.</p>	<p>identified at the earliest stage and if present, should be safeguarded throughout the project development to ensure compliance with all relevant planning policies. This should be achieved through the EIA process and where necessary should be undertaken in consultation with Natural England.</p> <p>The site selection process will ensure avoidance of all notable habitats, and areas allocated under policy CS23 (Green Infrastructure) where possible.</p>	
<i>Terrestrial species</i>	<p>Study area</p> <p>ERIC provided species records for the study area, and numerous records were found within the study area boundary. Protected species recorded within the study area include: bats (common pipistrelle, soprano pipistrelle and Daubenton's), water vole, great crested newt, and badger. Common toads</p>	<p>The presence of protected or notable species must be identified at the earliest stage and if present, should be safeguarded throughout the project development to ensure compliance with all relevant planning policies. This should be achieved through</p>	5.3

Consideration	Details	Details for site selection compliance with Planning Policy	Figure number
	<p>were also recorded within the study area boundary.</p> <p>A number of records for the UKBAP priority species; brown hare and hedgehog were also present within the study area.</p> <p>1km buffer zone</p> <p>Other protected species recorded within the buffer zone were: Natterer's and noctule bats, otter and the common lizard. Palmate and smooth newt and common frog were also recorded within the buffer zone.</p> <p>Due to the industrial nature of the area, a number of existing Environmental Statements are available for developments (add in references). Typically, the study area has previously been found to have some ornithological and invertebrate interest.</p>	<p>the EIA process and where necessary should be undertaken in consultation with Natural England.</p>	
<i>Land Use</i>	<p>The land use within the study area is predominantly industrial, and includes Teesside Power Station, Wilton International chemical plant and the Sahaviriya Steel Teesside (formerly Tata Steel and Corus) , and Teesport docks. Interspersed amongst the industrial areas, there are small pockets of greenfield land and larger areas of agricultural farmland are present, in particular along the south eastern and north eastern boundaries of the study area.</p> <p>Lazenby is a small town situated within the south of the study area. Wilton Primary School is present within Lazenby. The residential areas of Dormanstown and Grangetown abut the study area boundary.</p> <p>A stretch of the Teesdale Way long distance walk which passes between Warrenby near Redcar and the Cumbrian Pennines in England passes across the study area, along with a number of Public Rights of Way.</p> <p>The Bran Sands sewage treatment works is located in the north of the study area.</p>	<p>One policy from the Core Strategy DPD (CS10 Steel, Chemical and Port related Industries policy) states that</p> <p><i>'A total of 230 hectares of land will be safe-guarded for chemical and steel manufacturing industries'; and</i></p> <p><i>The continued development and expansion of the chemical, steel and port related industries will be supported'.</i></p>	5.4

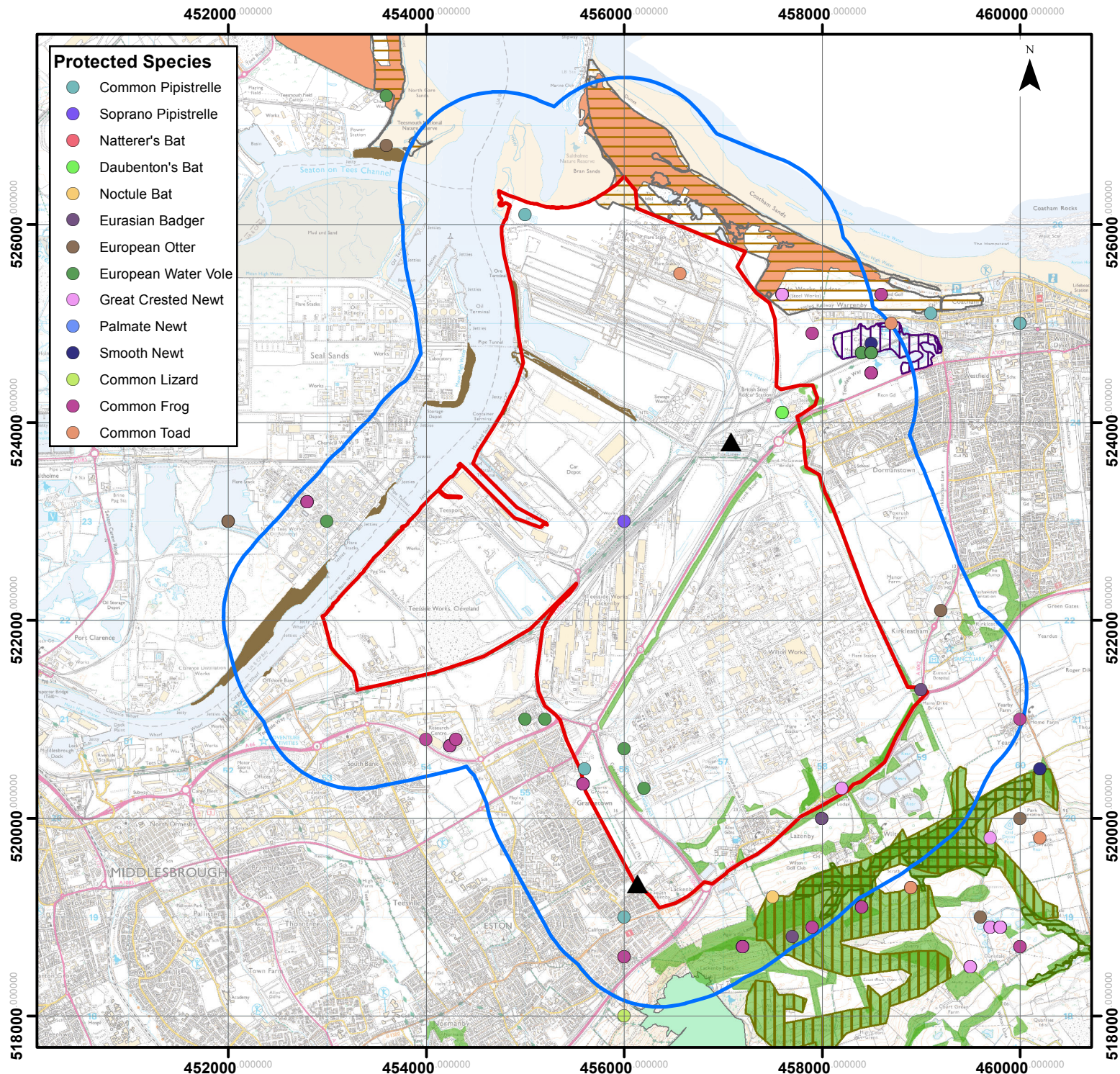
Consideration	Details	Details for site selection compliance with Planning Policy	Figure number
	<p>The Cleveland Golf course is directly adjacent to the north eastern boundary of the study area and the Wilton Golf Club is adjacent to the south eastern boundary.</p> <p>The Natural England Agricultural land classification classifies the majority of the study area as 'urban' with a small area in the north east classified as 'non-agricultural'.</p>		
<i>Archaeology and Cultural Heritage</i>	<p>A number of Listed Buildings are present within the study area and these are predominantly clustered around the town of Lazenby in the south.</p> <p>Within the study area, there are numerous Historic Environmental Records (HER) including: a number of 19th century areas and features (two spoil heap sites, Normanby Jetty, North Eastern Railway, Redcar Iron Works, Coatham Iron Works, South Gare Break Water and a tramway). Additionally, numerous discrete HER points were located within the study area boundary including medieval finds and world war bomb decoy sites.</p> <p>Eston Hills Historic Landscape is located close to the south east of the study area. Wilton Conservation Area and Kirkleatham Conservation Area are directly adjacent to the south eastern boundary of the study area.</p> <p>There are no World Heritage Sites, Historic Battlefields, and Ancient Monuments, Registered Parks and Gardens or areas designated as Heritage Coasts within the study area.</p>	<p>Policies aim for the preservation of archaeological sensitivities and the avoidance of impacts.</p> <p>The site selection process will avoid all impacts on Listed Buildings and HER, and a buffer will be maintained at all times around each.</p>	5.5
<i>Hydrology and Flood Risk</i>	<p>The River Tees is a major watercourse flowing alongside the western boundary of the study area. Smaller hydrological features within the study area include Kettle Beck, Kinkerdale Beck and Dabholm Gut, along with numerous smaller drains.</p> <p>Approximately 30% of the study area (the northern corner and extending south and west) lies within the Environment Agency's Flood Risk Zone 3a and most of the periphery of this area is classified as Flood Risk Zone 2.</p>	<p>In order to comply with planning policy, development within the flood risk zones should be avoided where possible.</p> <p>The SFRA has indicated that the SFRA development allocation units are suitable for development (with appropriate mitigation and FRA),</p>	5.6

Consideration	Details	Details for site selection compliance with Planning Policy	Figure number
	<p>Flood risk zone 3a indicates there is a '<i>high probability (1 in 100 or greater annual probability of river flooding in any year or 1 in 200 or greater annual probability of sea flooding in any given year)</i>'. Flood Risk Zone 2 is defined as '<i>medium probability (between 1 in 100 and 1 in 1,000 annual probability of river flooding or between 1 in 200 and 1 in 1,000 annual probability of sea flooding in any year)</i>'.</p> <p>A Strategic Flood Risk Assessment (SFRA) has been undertaken by Redcar and Cleveland Borough Council. This included a detailed assessment of flood hazards for the area at risk of tidal flooding and how this risk impacts on allocated development sites. The study has found that only a small number of the SFRA development allocation sites are at risk from flooding. Flood risk to these sites is seen as a 'residual risk' manageable through mitigation measures such as selected land raising and flood resilience techniques. The SFRA concluded that all of the sites assessed in the Level 2 SFRA should be suitable for development subject to a detailed flood risk assessment (FRA) (JBA Consulting, 2010). A number of the SFRA allocated development sites are located within the study area boundary.</p>	<p>however on a precautionary basis, the site selection process will aim to avoid areas which fall into the Environment Agency Flood Risk Zone 3a.</p>	
<i>Hydrogeology and Groundwater</i>	<p>Using 50K mapping, artificial groundwater was found in the northern and western parts of the study area. Areas of groundwater vulnerability (minor aquifers) were also found in the within the northern and western areas of the study area.</p> <p>There were no areas of groundwater drift, and no Environment Agency groundwater abstraction licences were found within the study area.</p> <p>The study area is not located within a Groundwater Source Protection Area.</p>	<p>RSS policy 36 relates to the aquatic and marine environment. Policy 36 supports the enhancement and protection of the quality of water, including adaptation and mitigation measures where appropriate, and supports the use of Sustainable Drainage systems.</p> <p>The site selection process will avoid hydrological features where possible in order to minimise the likelihood of any potential runoff associated with development.</p>	5.7

Consideration	Details	Details for site selection compliance with Planning Policy	Figure number
<i>Geology</i>	<p>The bedrock geology of the study area is comprised of mudstone and sandstone. Mercia Mudstone (layer of red and green mudstone, with gypsum and sandstone with halite in the lower part) occurs in the north and west, and Redcar Mudstone (mudstone with thin sandstone and limestone beds in the lower part) in the east and south of the study area. A narrow band of the Penarth Group (grey and green mudstone and sandstone) runs between the two.</p> <p>The superficial geology of the study area is predominantly covered by Tidal Flat Deposits (consolidated soft low plasticity clay, with layers of sand, gravel and peat) in the north and west, a band of Glaciolacustrine deposits of clay and silt across the centre and Till deposits (Diamicton) in the south. There is also a small band of blown sand in the north.</p> <p>There are no Geological SSSIs or Regionally Important Geological/Geomorphologic Sites (RIGS) located within the study area.</p>	<p>RCBC policy CS24 relates to the geology of the area, and is in line with PPS9. It supports protection of geological sites of special scientific interest.</p> <p>No sites of geological interest were found within the study area and therefore the development will comply with this policy.</p>	5.8 and 5.9
<i>Land Quality</i>	<p>There are a number of authorised landfill sites within the study area. The Bran Sands modified site is present in the north of the study area with the Cleveland sites in the west. These are the three largest areas of landfill within the study area. There are smaller areas of authorised (closure) landfills (Wilton Perimeter Mounds) around the southern and eastern areas of the study area, along the A1085, the A1053 and to the north of Lazenby.</p> <p>Warrenby landfill sites are directly adjacent to the north eastern boundary of the study area.</p> <p>There are a number of Environmental Permitting Regulations Licenced Sites (industrial) around the study area and historical landfills are also present within the study area.</p> <p>Currently no areas of land have been determined as contaminated under Part</p>	<p>The RCBC Policy DP7 of the Development Plan DPD sets out the requirements for developments sited near or on contaminated land:</p> <p><i>‘Applicants proposing development on or near potentially contaminated land or unstable land will be required to undertake a site investigation to assess the type, extent of contamination or instability and any remediation options’.</i></p> <p>Authorised and historic landfills will be avoided which will comply with policy. Due to the industrial nature of the study area, it is possible that there will</p>	5.10

Consideration	Details	Details for site selection compliance with Planning Policy	Figure number
	2A of the Environmental Protection Act 1990. Information regarding possible sites requiring further investigation by the council under Part 2A was unavailable at the time of this report.	be unstable or contaminated land present. The council contaminated land identification process is ongoing and therefore has limited potential to feed into the site selection process at this stage.	
<i>Utilities and Transport Infrastructure</i>	<p>The principal transport infrastructure within the study area includes three A-roads: the A1053 (in the south-west); A1085 (running through the middle of the site); and the A174 (along the south-eastern study area boundary).</p> <p>One passenger railway line runs diagonally across the northern half of the study area, linking Saltburn, Redcar and Marske to Middlesbrough. British Steel Redcar railway station (north east) and South Bank railway station are within the north east and south east of the study area respectively.</p> <p>A number of railways are located within the study area associated within existing and historic industrial facilities.</p> <p>Tod Point and Lackenby electrical substations are located within the study area along with overhead lines.</p> <p>Pipelines (active and historic) and buried utilities are located within the south of study area.</p>	The most relevant policy for transport issues regarding the development may be found in RCBC's Managing Travel Demand (CS26). Proposals which support sustainability and minimise <i>congestion, environmental and safety issues</i> will be supported.	5.11
<i>Landscape</i>	<p>England is divided into landscapes of similar features. Teesside and the study area falls into the Natural England Landscape Character Area 23 'Tees Lowlands', the characteristics of which include:</p> <ul style="list-style-type: none"> • A broad low-lying plain of gently undulating, predominantly arable, farmland with wide views to distant hills. • Meandering, slow-moving river Tees flows through the heart of the area dividing the lowlands to north and south. • Contrast of quiet rural areas with extensive urban and industrial development concentrated along the lower reaches of the Tees, the estuary and coast. • Large-scale chemical and oil refining works, dock facilities and other heavy 	<p>Planning policy seeks to avoid impacts on important landscape character areas.</p> <p>RSS policy 2 sustainable development seeks to <i>'protect and enhance the quality and diversity of the Region's rural and urban land and landscapes'</i></p> <p>RCBC Core Strategy and Landscape Character Assessment also do not specify the study area as</p>	5.12

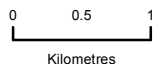
Consideration	Details	Details for site selection compliance with Planning Policy	Figure number
	<p>plants along the Tees estuary form a distinctive skyline by day and night.</p> <ul style="list-style-type: none"> • Overhead transmission lines and pylons, motorway corridors, railway lines and other infrastructure elements are widespread features. • Woodland cover is generally sparse but with local variation such as at Skerne Carr, on steep banks of the middle reaches of the Tees, and to parkland and managed estates. • Distinctive areas of peaty fenland flats and carrs within the Skerne lowlands. Extensive areas of mud flats, saltmarsh wetlands and dunes at mouth of the river Tees which support valuable wildlife habitats. • Minor valleys and linear strips of open land extend as 'green corridors' from rural farmland into the heart of the Teesside conurbation. <p>No Areas of Outstanding Natural Beauty or National Parks are located within the study area.</p>	<p>being within a particular area of protection. The developed and industrial nature of the landscape is not a landscape that is protected and therefore complies with policy.</p>	



Legend

- ▲ National Grid Substations
- ▭ Converter Station Study Area
- ▭ 1km Converter Station Search Area buffer
- ▨ Ancient Woodland
- ▨ Woodland
- ▨ Coastal Floodplain Grazing Marsh
- ▨ Coastal Sand Dunes
- ▨ Woodland
- ▨ Intertidal Mudflats
- ▨ Reedbeds
- ▨ Upland Heath

Source:
Ancient Woodland © Natural England 2011
Marshes, Coastal Sand Dunes, Deciduous Woodland,
Intertidal Mudflats, Reedbeds, Protected Species,
UK Biodiversity Action Plan Species
© Environmental Records Information Centre for the
North East of England 2011
Coatham Marsh Wildlife Trust Reserve © Tees Valley Wildlife Trust
Ordnance Survey © Crown copyright and database right, 2011



PROJECT TITLE **DOGGER BANK R3 DEVELOPMENT**
Onshore Converter Station Study Area Characterisation

DRAWING TITLE
**Figure 5.3: Notable Habitats
and Protected Species Records**

REV	DATE	REMARKS	Dm. By	Ckd. By
0	05/09/2011	Original	HLRW	RH

DRAWING NUMBER:

9W7904/CCSAC/5.3/00

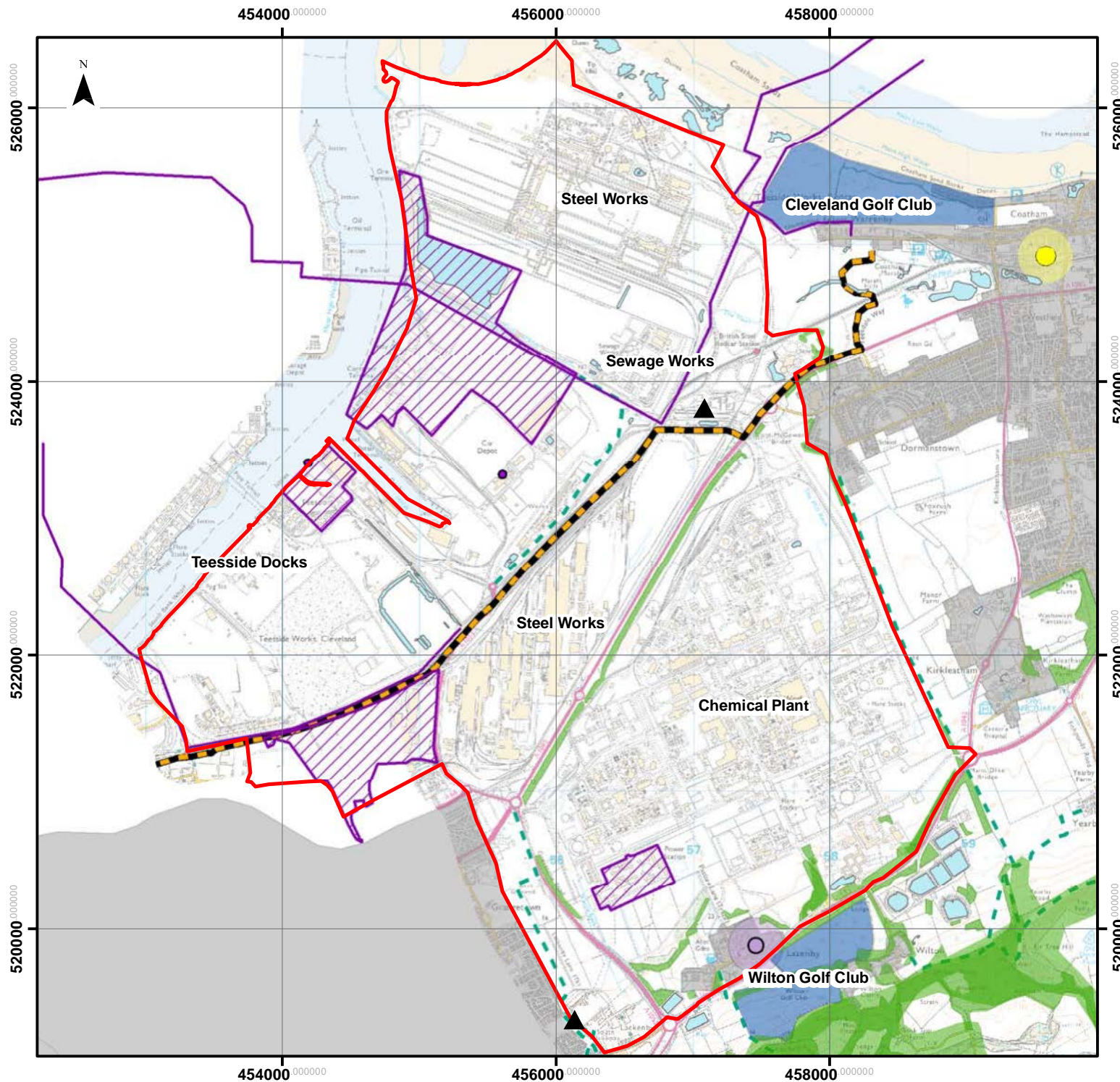
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ROYAL HASKONING



Legend

- ▲ National Grid Substations
- Converter Station Study Area
- Other Proposed Projects (See Fig 5.1 for details)
- Waterbodies
- Woodland
- Golf Course
- Public Right of Way
- Teesdale Way
- Hospital
- Hospital + 200m Buffer
- Wilton Primary School
- Wilton Primary School + 200m buffer
- Residential Areas

Source: Ordnance Survey © Crown copyright and database right, 20110
Woodland © Environmental Records Centre of the
North East 2011
Natural England, digitised from 1:25000 OS mapping

0.5 1
Kilometres

PROJECT TITLE **DOGGER BANK R3 DEVELOPMENT**
Onshore Converter Station Study Area Characterisation

DRAWING TITLE

Figure 5.4: Land Use

REV	DATE	REMARKS	Dm. By	Ckd. By
0	30/08/2011	Original	HLRW	RH

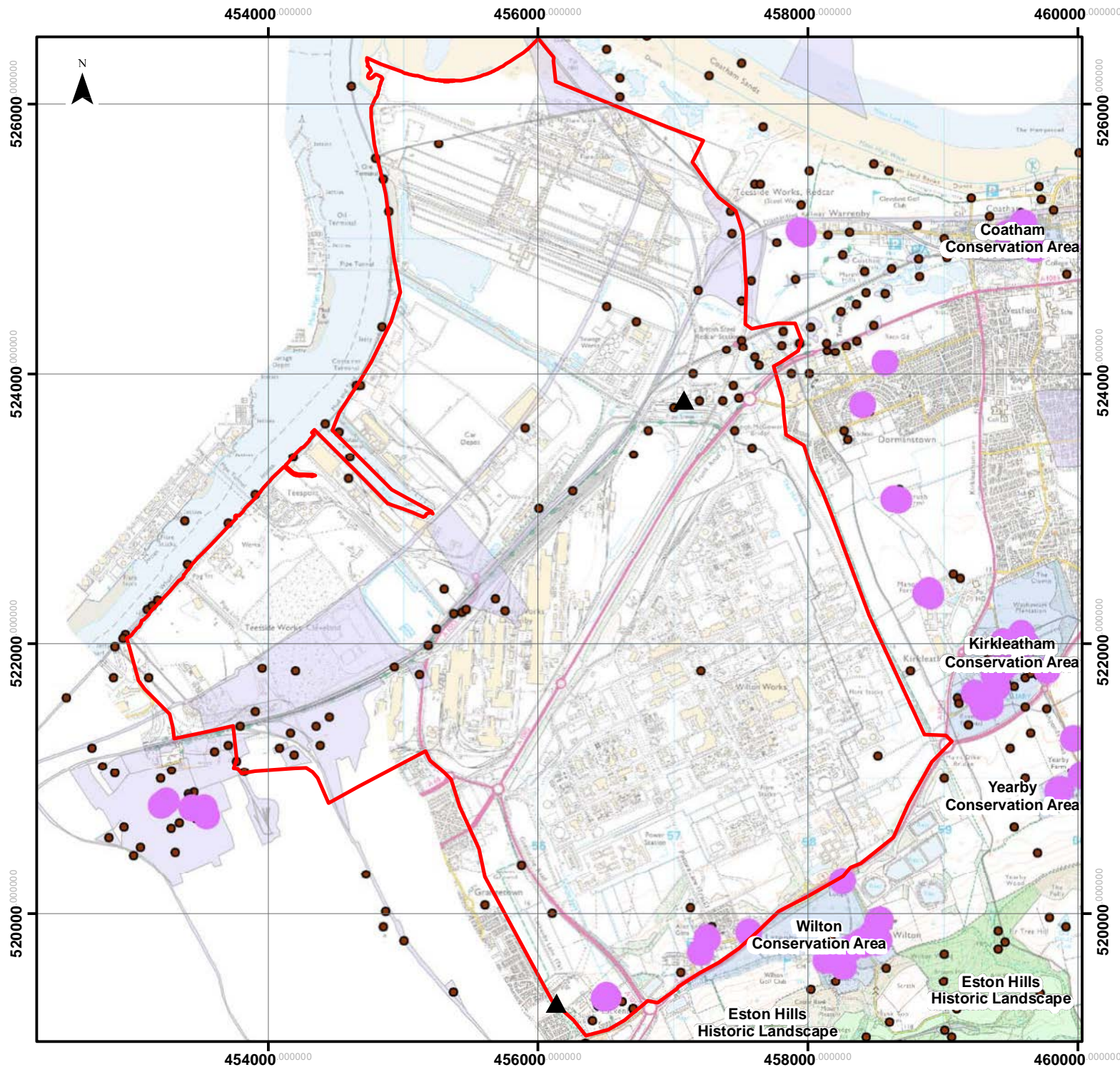
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SCALE	1:40,000	PLOT SIZE	A4	DATUM	OSGB	PROJECTION	BNG
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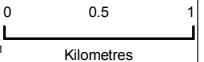
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LEGEND

- ▲ National Grid Substations
- ▭ Converter Station Study Area
- Listed Building + 100m Buffer
- Historic Environmental Record Point
- Historic Environmental Record Site
- Conservation Area
- Historic Landscape



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Onshore Converter Station Study Area Characterisation

DRAWING TITLE
Figure 5.5: Archaeology and Cultural Heritage

REV	DATE	REMARKS	Dm. By	Ckd. By
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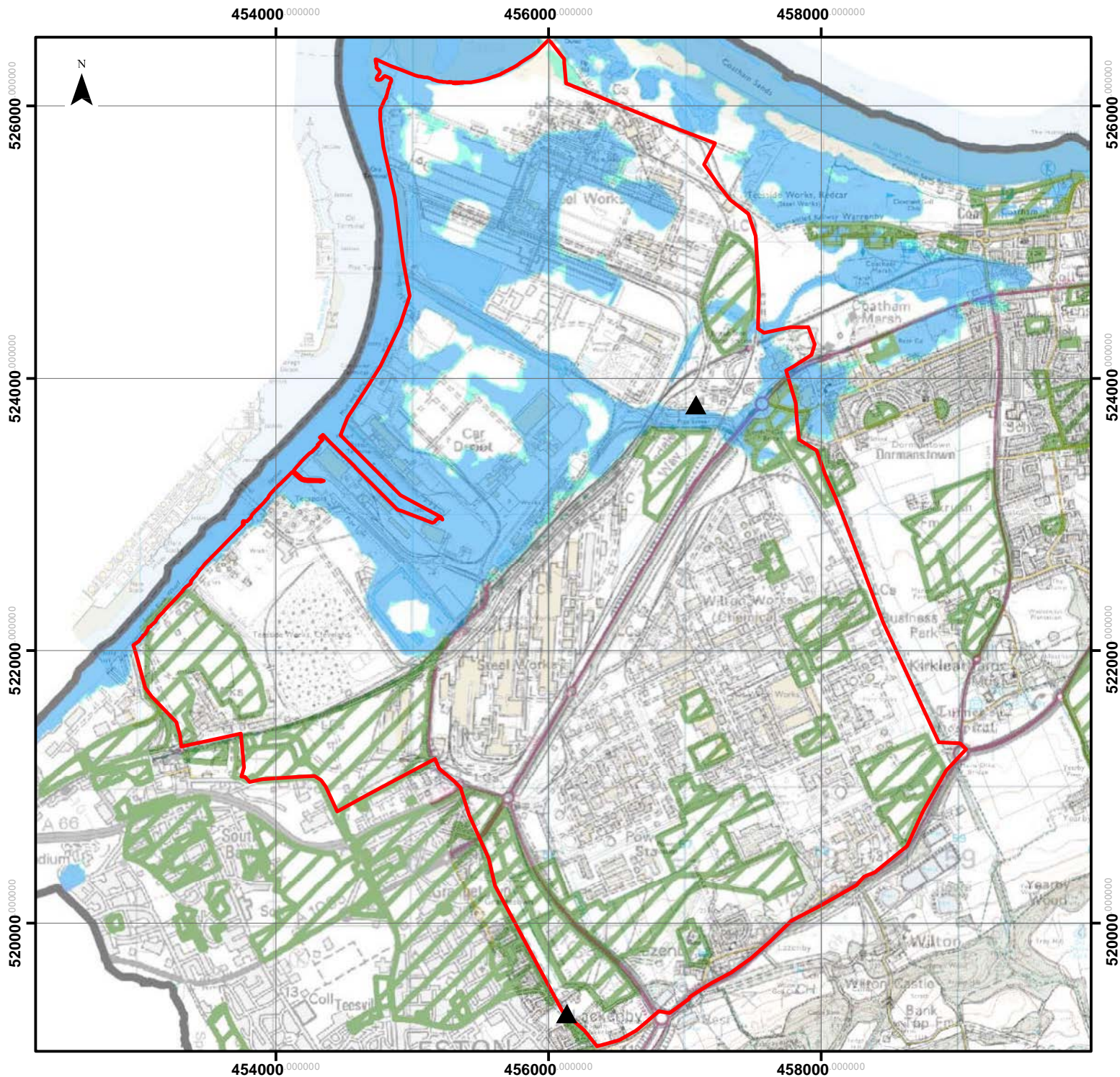
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SCALE	1:40,000	PLOT SIZE	A4	DATUM	OSGB	PROJECTION	BNG
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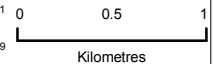




Legend

- ▲ National Grid Substations
- ▭ Converter Station Study Area
- Flood Risk Zone 3a
- Flood Risk Zone 2
- ▨ SFRA Development Allocations

Source:
Ordnance Survey © Crown copyright and database right, 2011
Flood Risk Zones, Local Planning Authority
Development Allocations
© Redcar & Cleveland Strategic Flood Risk Assessment 2009
National Grid Substations © National Grid 2011



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Onshore Converter Station Study Area Characterisation

DRAWING TITLE

Figure 5.6: Flood Risk

REV	DATE	REMARKS	Dm. By	Ckd. By
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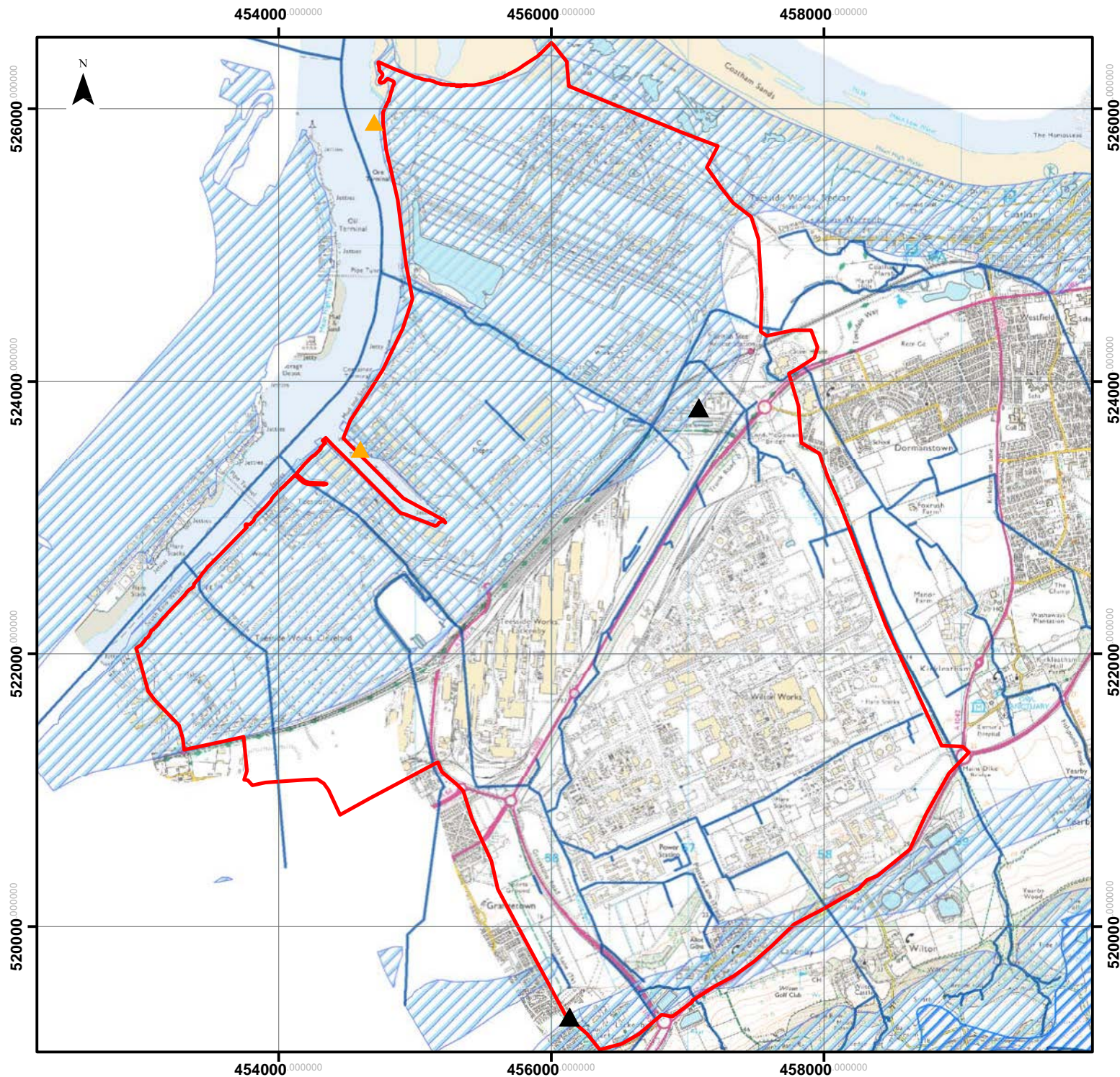
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SCALE	1:40,000	PLOT SIZE	A4	DATUM	OSGB	PROJECTION	BNG
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Legend

- ▲ National Grid Substations
- ▭ Converter Station Study Area
- Watercourses
- Waterbodies
- Groundwater Vulnerability (Minor Aquifer)
- ▲ Water Abstraction Licence Granted

Source:
Rivers Network, Groundwater Drift,
Groundwater vulnerability © Environment Agency 2011
Lakes digitised from OS 1:25000 mapping
Ordnance Survey © Crown copyright and database right, 2011

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Kilometres

PROJECT TITLE **DOGGER BANK R3 DEVELOPMENT**
Onshore Converter Station Study Area Characterisation

DRAWING TITLE
Figure 5.7: Hydrology and Hydrogeology

REV	DATE	REMARKS	Dm. By	Ckd. By
0	30/08/2011	Original	HLRW	RH

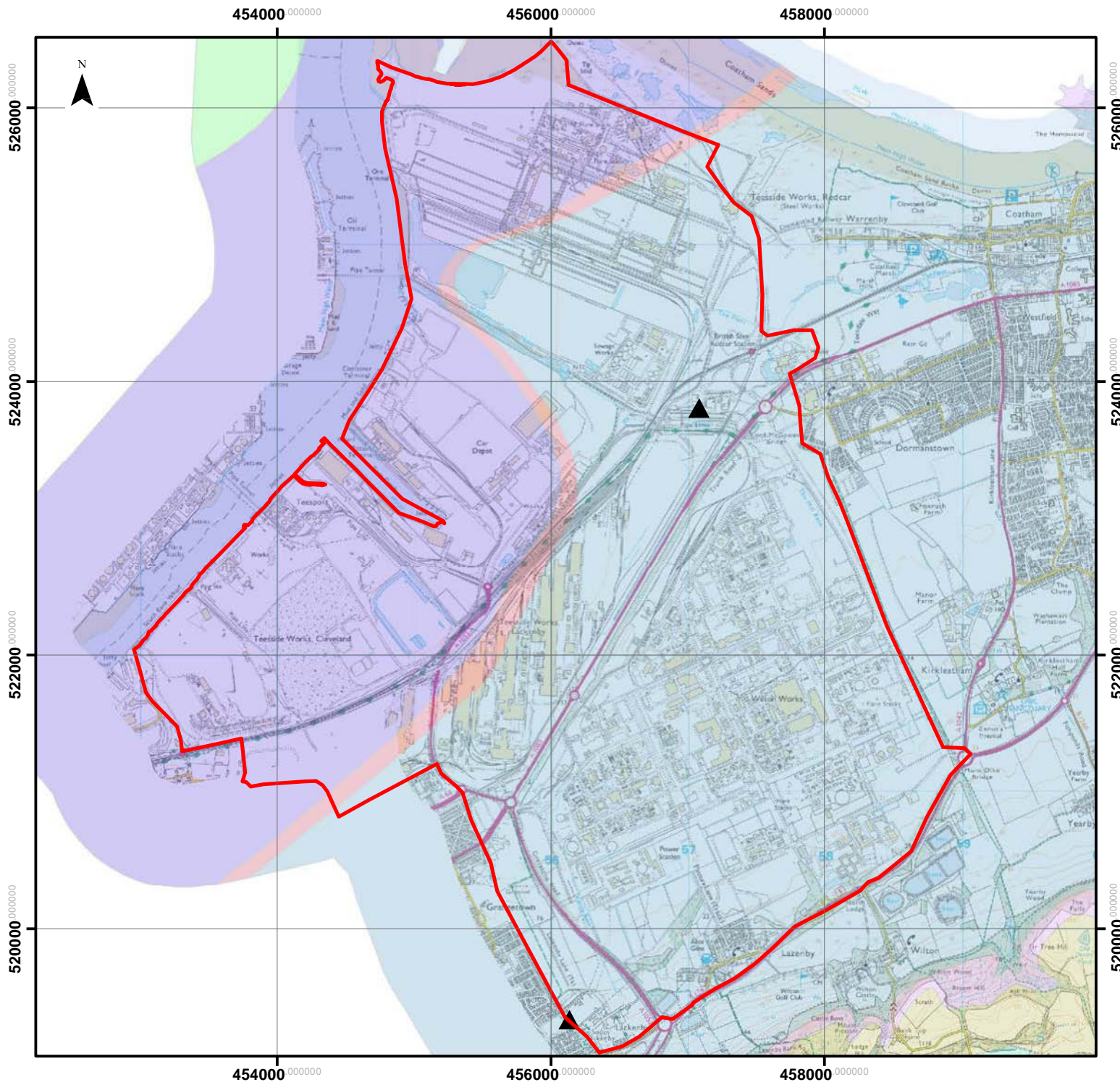
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Legend

Converter Station Study Area

National Grid Substations

Bedrock Geology

CLEVELAND IRONSTONE FORMATION

MERCIA MUDSTONE GROUP

PENARTH GROUP

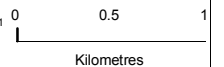
REDCAR MUDSTONE FORMATION

SHERWOOD SANDSTONE GROUP

STAITHES SANDSTONE FORMATION

WHITBY MUDSTONE FORMATION

Sources:
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Bedrock Geology © British Geological Survey 2011
Groundwater Vulnerability © Environment Agency 2011
National Grid Substations © National Grid 2011



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Onshore Converter Station Study Area Characterisation

DRAWING TITLE
Figure 5.8: Bedrock Geology

REV	DATE	REMARKS	Dm. By	Ckd. By
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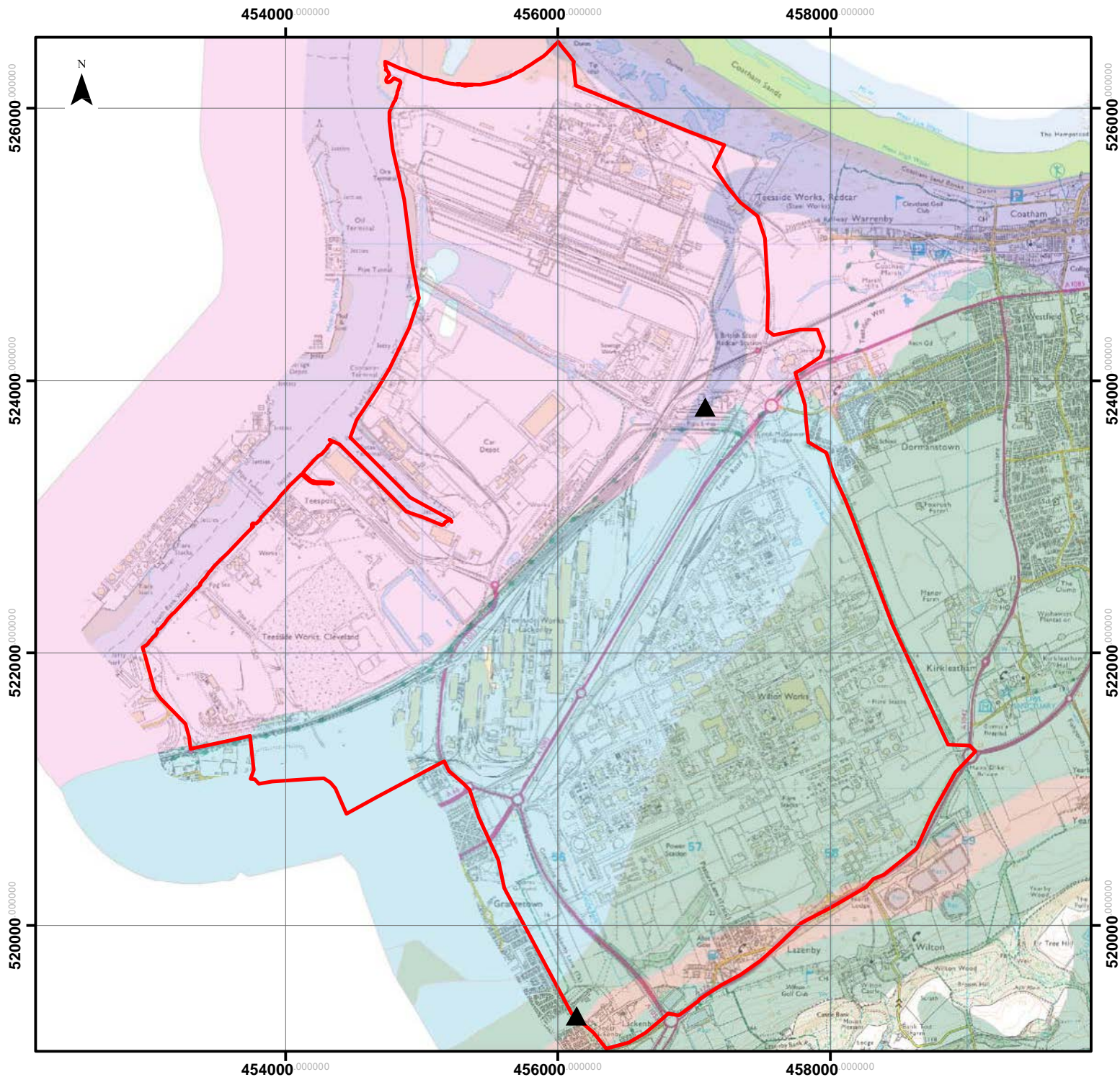
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Legend

Converter Station Study Area

National Grid Substations

Superficial Geology

BEACH AND TIDAL FLAT DEPOSITS (UNDIFFERENTIATED)

BLOWN SAND

GLACIOFLUVIAL DEPOSITS, DEVENSIAN

GLACIOLACUSTRINE DEPOSITS, DEVENSIAN

TIDAL FLAT DEPOSITS

TILL, DEVENSIAN

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Superficial Geology © British Geological Survey 2011
National Grid Substations © National Grid 2011

0 0.5 1
Kilometres

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Onshore Converter Station Study Area Characterisation

DRAWING TITLE

Figure 5.9: Superficial Geology

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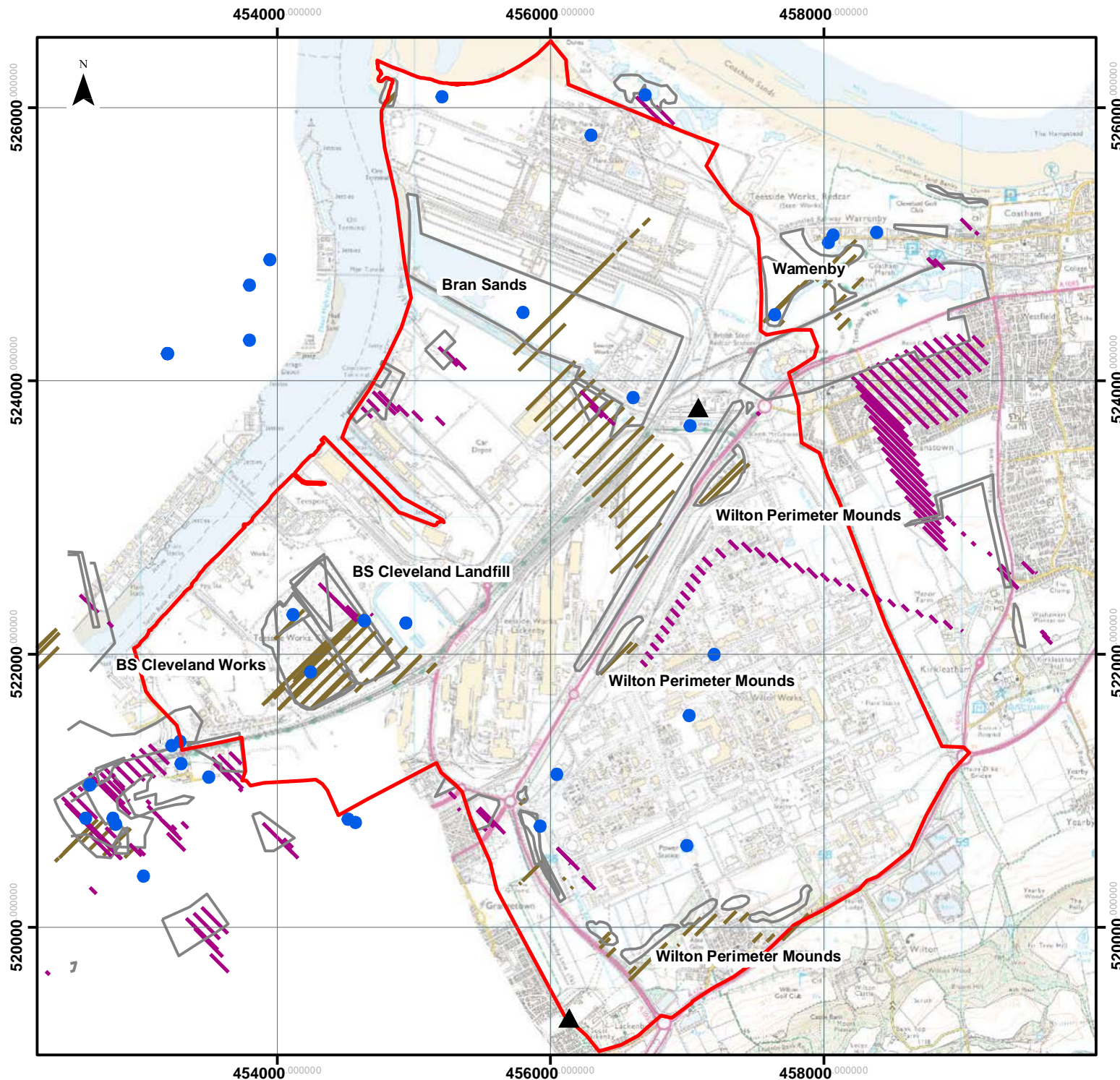
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Legend

- National Grid Substations
- Converter Station Study Area
- Environmental Permitting Regulations Licenced Site
- Historic Landfill Sites
- Authorised Landfill Sites

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 Round 3 © TCE, 2010.
 Bathymetry © SeaZone, 2011.

0 0.5 1
 Kilometres

PROJECT TITLE DOGGER BANK R3 DEVELOPMENT
 Onshore Converter Station Study Area Characterisation

DRAWING TITLE

Figure 5.10: Land Quality

REV	DATE	REMARKS	Dm. By	Ckd. By
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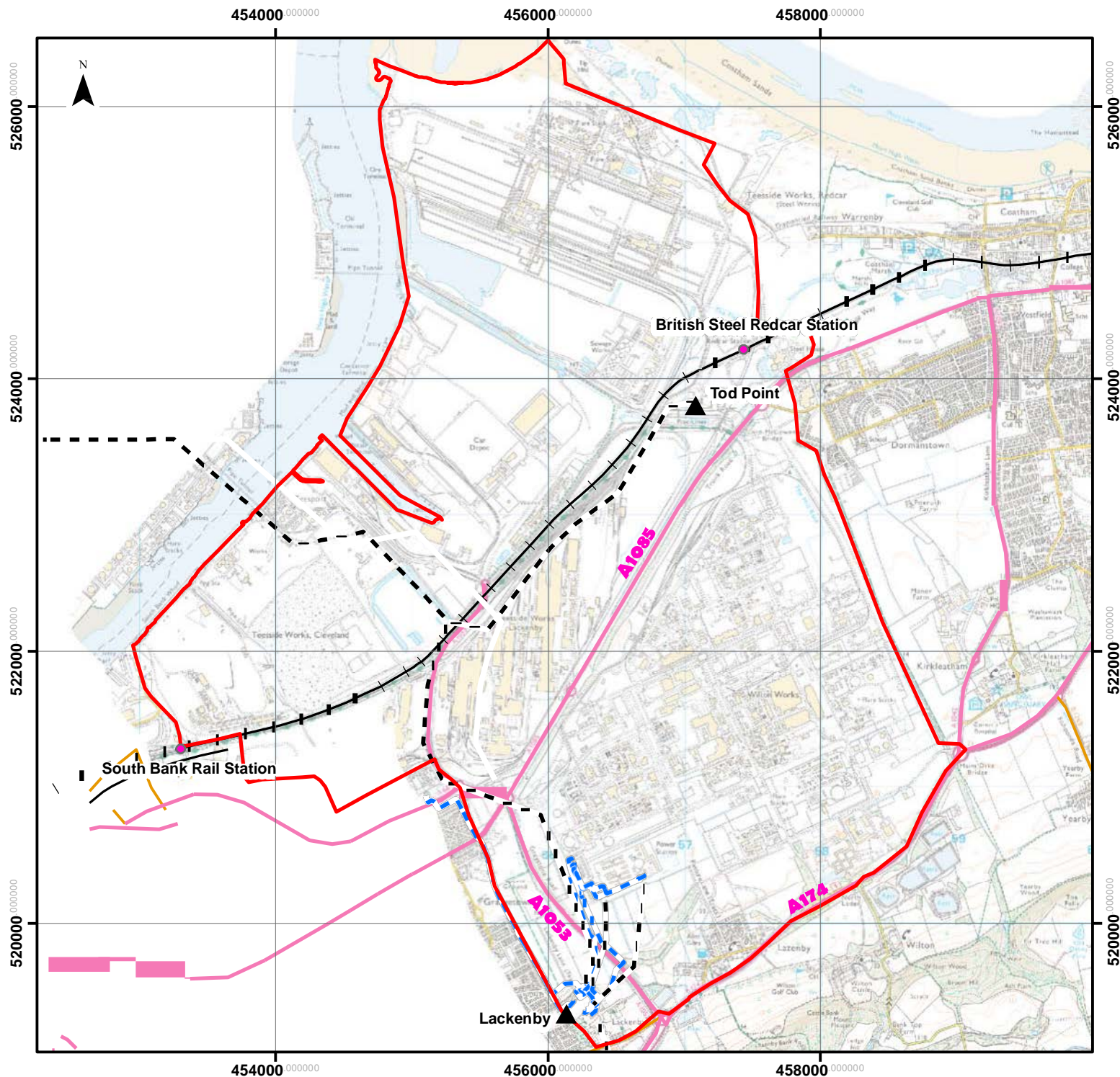
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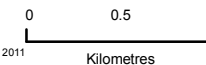
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Legend

- Converter Station Study Area
- National Grid Substations
- Overhead Power Line (400kV)
- Underground Cables
- Railway
- A Road
- B Road



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Onshore Converter Station Study Area Characterisation

DRAWING TITLE
Figure 5.11: Utilities and Transport Infrastructure

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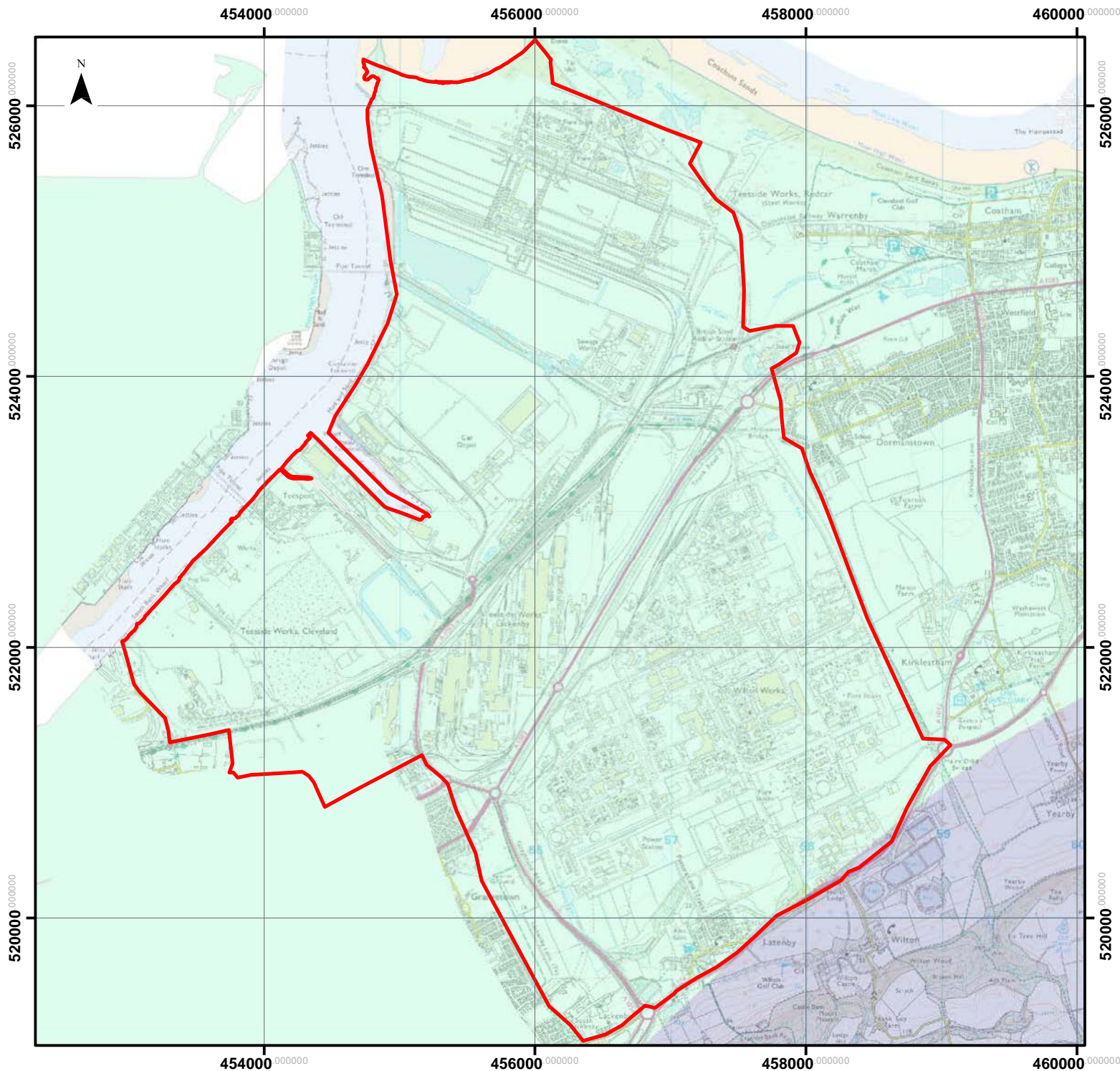
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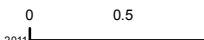


Legend

Converter Station Study Area

National Landscape Character Areas

- NORTH YORKSHIRE MOORS AND CLEVELAND HILLS
- TEES LOWLANDS



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Round 3 of TCE, 2010
Bathymetry © SeaZone, 2011.

Kilometres

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Onshore Converter Station Study Area Characterisation

DRAWING TITLE

Figure 5.12: Landscape

REV	DATE	REMARKS	Dm. By	Ckd. By
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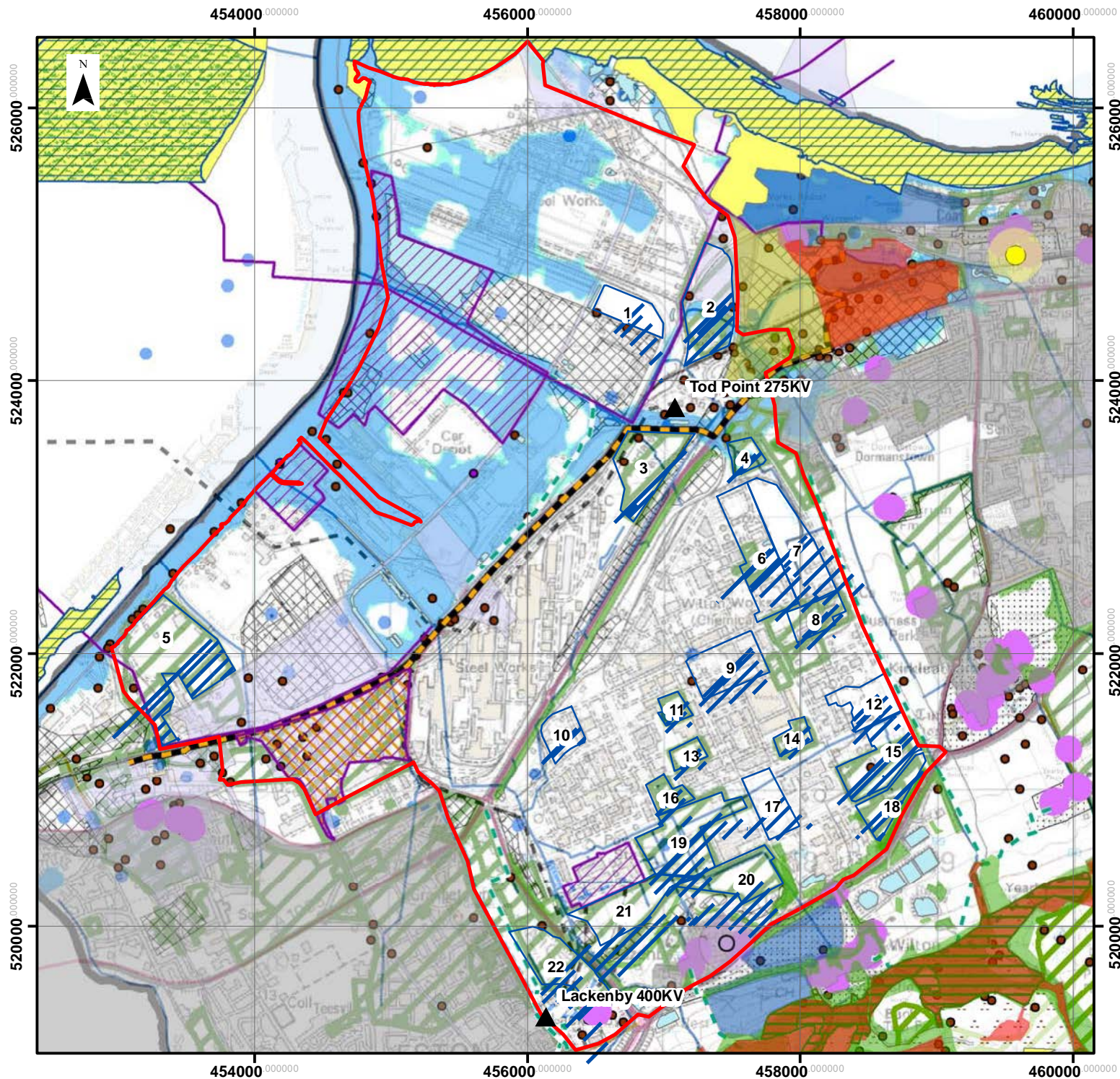
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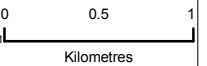
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 Round 3 © TCE, 2010.
 Bathymetry © SeaZone, 2011.



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 Onshore Converter Station Study Area Characterisation

DRAWING TITLE

Figure 5.13: Combined Considerations

REV	DATE	REMARKS	Dm. By	Ckd. By
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DRAWING NUMBER:

9W7904/CSSAC/5.13/00







































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Legend for Figure 5.13

	Converter Station Study Area
	National Grid Substations
	Potential Converter Station Sites
	Ramsar Site
	Special Protection Area (SPA)
	Site of Special Scientific Interest (SSSI)
	National Nature Reserve (NNR)
	Local Nature Reserve (LNR)
	Local Wildlife Sites (Hartlepool and Redcar & Cleveland)
	Ancient Woodland
	Wildlife Trust Nature Reserve
	Other Key Projects
	Waterbodies
	Special Area of Conservation
	Woodland
	Golf Course
	Public Right of Way
	Teesdale Way
	Hospital + 200m Buffer
	School + 200m Buffer
	Residential Areas
	SAM
	Listed Building + 100m Buffer
	Historic Environmental Record Point
	Historic Environmental Record Site
	Conservation Area
	Historic Landscape
	SFRA Development Allocations
	Flood Risk Zone 3a
	Flood Risk Zone 2
	Watercourses
	Environmental Permitting Regulations Licenced Site
	Active and Historic Landfill Sites
	Overhead Power Line (400kV)
	Underground Cables
	Railway
	A Road
	B Road

6 SITE IDENTIFICATION

6.1 Areas with significant development constraints

Based on the assessment undertaken and outlined in **Table 5.1**, the review of planning policy, environmental statements and aerial photography, a large proportion of the study area was deemed to be constrained in terms of development considerations. These locations have been deemed constrained on the following grounds:

- Valuable BAP habitats (Intertidal Mudflats and Deciduous Woodland) (**Figure 5.3**);
- Land use: existing industrial areas, residential areas and Wilton Primary School (**Figure 5.4**);
- Archaeological sensitivities: Listed buildings and Historic Environmental Records (**Figure 5.5**);
- Areas with high risk of flooding (**Figure 5.6**);
- Areas of active and historic landfill (**Figure 5.10**); and
- Existing infrastructure (roads and railway) (**Figure 5.11**).

6.2 Potential site locations

The following criteria have been used to identify potential sites suitable for the converter station(s) (see **Table 6.1**):

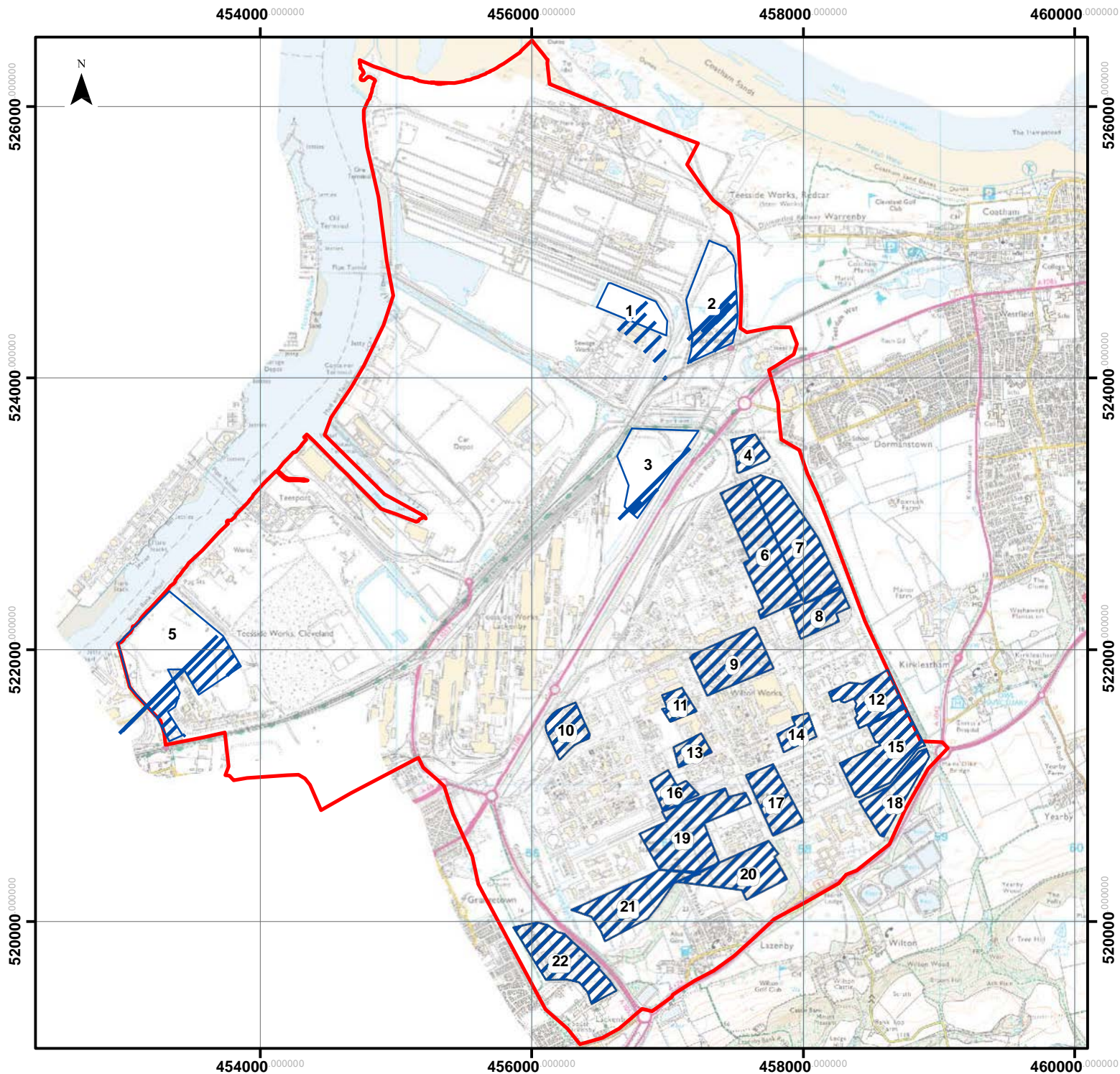
- A minimum of 3.5 hectares;
- No existing residential development within the site boundary;
- No known current or proposed industrial development within the site boundary;
- No designated or non-designated nature conservation, landscape or heritage sites within the site boundary ;
- In compliance with local spatial planning policies;
- Not within Flood Risk Zone 2 or 3a; and
- Not on known landfill sites.

Table 6.1 Initial Sites Identified



Site Number	Easting	Northing	Area (ha)	Distance to Lackenby NG Substation (km)	Distance to Tod Point NG Substation (km)
1	456751	524514	10	5.06	0.53
2	457337	524558	24	4.90	0.34
3	456873	523381	21	3.70	0.17
4	457596	523451	5	4.21	0.49
5	453363	521944	47	3.40	3.74
6	457688	522734	25	3.30	0.77
7	457945	522804	25	3.30	0.78
8	458114	522271	8	3.58	1.68
9	457470	521914	17	2.37	1.72
10	456257	521418	8	1.89	2.32
11	457073	521596	4	2.35	2.08
12	458494	521644	12	3.11	2.38
13	457175	521263	4	2.08	2.43
14	457953	521389	4	2.59	2.44
15	458589	521237	20	2.79	2.90
16	457029	520963	5	1.73	2.70

Site Number	Easting	Northing	Area (ha)	Distance to Lackenby NG Substation (km)	Distance to Tod Point NG Substation (km)
17	457782	520898	11	2.12	2.73
18	458661	520933	10	2.78	3.10
19	457165	520656	25	1.34	2.84
20	457556	520368	16	1.36	3.27
21	456730	520143	18	0.69	3.42
22	456237	519723	19	0.24	3.93

The sites listed in **Table 6.1** are depicted in **Figure 6.1**. The initial development considerations for each site are described in more detail in **Table 6.2**. In section 7 **Table 7.1** provides a high level overview of the key considerations for each site.



Legend

-  Potential Converter Station Sites
-  Converter Station Study Area

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Round 3 © TCE, 2010.
Bathymetry © SeaZone, 2011.

0 0.5 1
Kilometres

PROJECT TITLE **DOGGER BANK R3 DEVELOPMENT**
Onshore Converter Station Study Area Characterisation

DRAWING TITLE
Figure 6.1: Onshore Converter Station Sites Identified

REV	DATE	REMARKS	Dm. By	Ckd. By
0	07/09/2011	Original	HLRW	SDS

DRAWING NUMBER:
9W7904/CSSAC/6.1/00

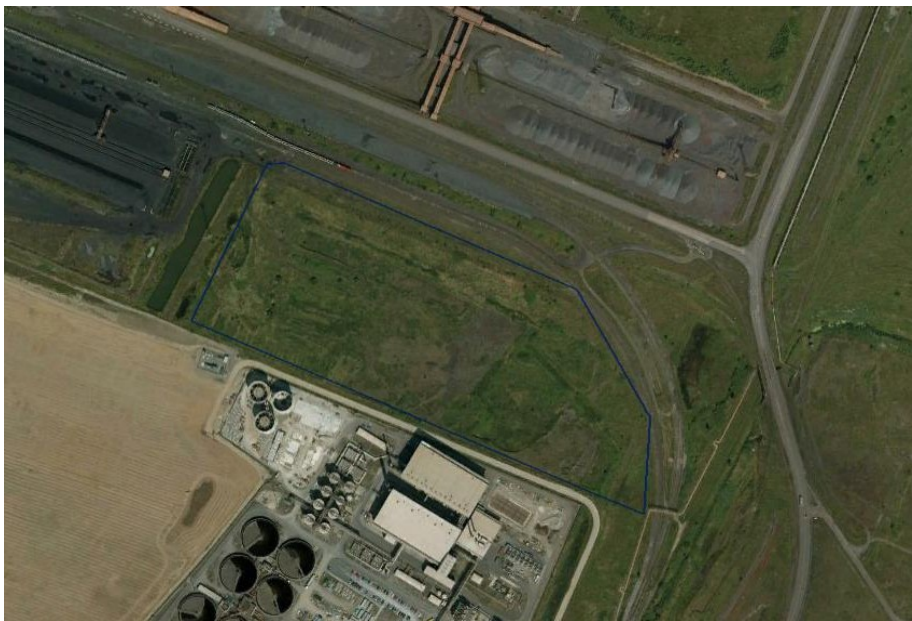
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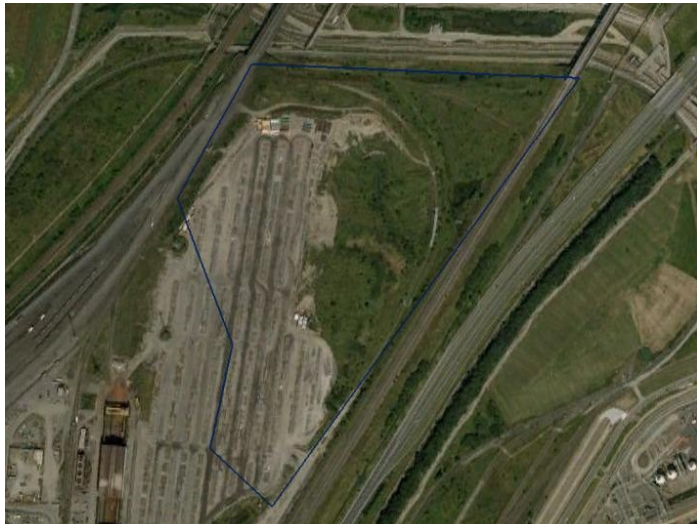


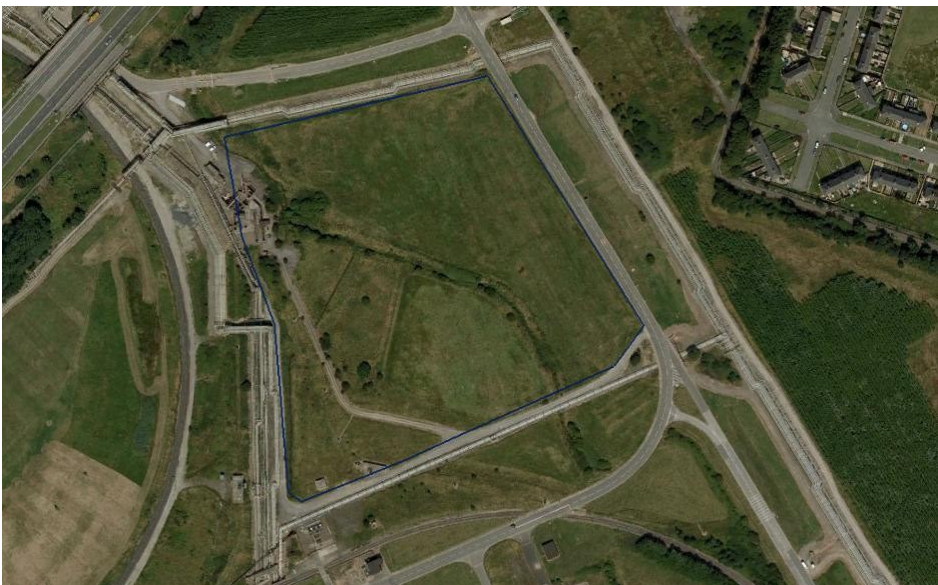
Table 6.2 Potential Converter Station Site Locations


Site Number	1
Area (ha)	10
Existing land use	Existing area of vegetated brownfield land with a railway line running along the northern and eastern boundary of the site. This has been determined through an assessment of aerial photography only. A site visit will be required to accurately determine the current land use.
Planning policy considerations	<p>Adopted Proposals Map: Site located within policy unit <i>CS10 Steel, Chemical and Port Related Industries</i>:</p> <p>'The continued development and expansion of the chemical, steel and port industries will be supported. A total of 230 hectares of land will be safeguarded for chemical and steel manufacturing industries in line with the RSS:</p> <p>a) At Wilton International for chemical related activities;</p> <p>b) At Corus Steel Works in South Tees, Redcar and Skinningrove for steel related activities; and</p> <p>c) Along the River Tees for port related development and where it is required for future improvements to the capacity of the freight rail line, road network and terminal associated with the port.'</p>
Ecology considerations	The presence of statutory designated sites close by requires consideration. A watercourse is present outside the site and runs parallel to the north western boundary. This has potential to support protected or notable ¹ species.
Archaeology considerations	Two Historic Environmental Record points are located on southern boundary of site: These are a medieval spear and 19 th Century tramway.
Landscape considerations	No existing or known landscape considerations. The site is located within the Tees Lowland National Landscape Character Area
Land quality	A modified active landfill is directly adjacent to the southern site boundary and steel works lie to the north.
Flood risk, hydrology & hydrogeology	The site is not located within a Flood Risk Zone. The site is located within an area of groundwater vulnerability.
Access considerations	Access options may be limited. The site appears (from aerial photography) to be partially encircled by a railway line running along the northern and eastern boundary. An existing industrial area is located along the majority of the southern boundary and a watercourse runs close to the north western boundary. Options for access are present in the south east and south west corner of the site.
Landowner	Unknown
Aerial Photography	

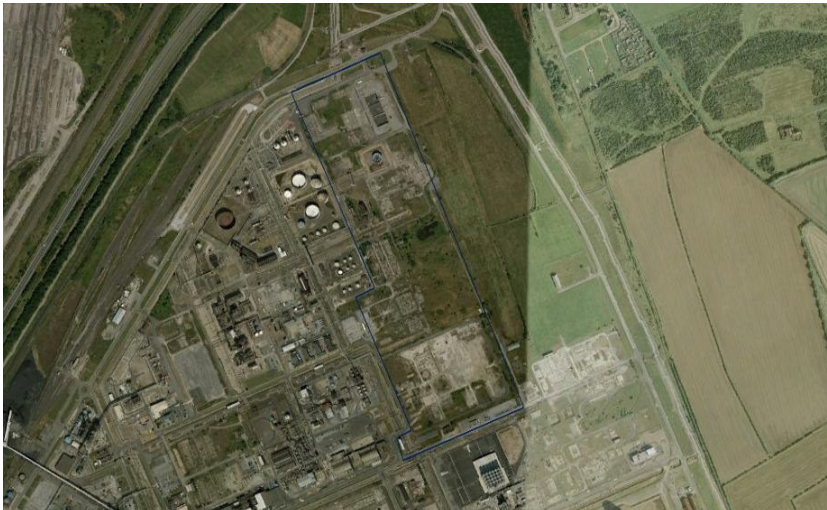
¹ Notable species include those which are listed on Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006, identified in a Red Data book or are identified in the UK Biodiversity Action Plan (BAP) or the Local BAP (LBAP)


Site Number	2
Area (ha)	24
Existing land use	Large vegetated brownfield site bound on all sides by minor roads. Scattered trees and minor watercourse present within site. Railway line runs parallel to the southern boundary of the site. Minor internal roads bisect the southern area of the site. Proposed Breagh gas pipeline runs along western boundary of the site. This has been determined through an assessment of aerial photography only. A site visit will be required to accurately determine the current land use.
Planning policy considerations	<p>Adopted Proposals Map: Site located within policy unit <i>CS10 Steel, Chemical and Port Related Industries</i>:</p> <p>'The continued development and expansion of the chemical, steel and port industries will be supported. A total of 230 hectares of land will be safeguarded for chemical and steel manufacturing industries in line with the RSS:</p> <p>a) At Wilton International for chemical related activities;</p> <p>b) At Corus Steel Works in South Tees, Redcar and Skinningrove for steel related activities; and</p> <p>c) Along the River Tees for port related development and where it is required for future improvements to the capacity of the freight rail line, road network and terminal associated with the port.'</p>
Ecology considerations	The presence of statutory designated sites close by requires consideration and Coatham Marsh Wildlife Trust Nature Reserve is adjacent to the eastern boundary of the site. Scattered trees and watercourse within site boundary. These may have potential to support protected or notable species.
Archaeology considerations	The site is recorded in the Historic Environment Record as being the location of the Redcar Iron works. A 19 th Century tramway and the North Eastern Railway (Darlington section) are also recorded within the site boundary.
Landscape considerations	No existing or known ecological considerations. Site is located within the Tees Lowland National Landscape Character Area
Land quality	Active landfill site located adjacent to eastern boundary of the site.
Flood risk, hydrology & hydrogeology	<p>The majority of the site is not at risk of flooding. A small part of the southern area of the site falls within the Flood Risk Zone 3a. Site located within Strategic Flood Risk Assessment Development Allocation (SFRA) area – specific risk from studies have shown that without mitigation, small scale flooding could occur on the site but if The Fleet is kept open and tidal gates considered, along with lower sections of land on the site raised, the site could still be considered for development, subject to a detailed flood risk assessment (JBA Consulting, 2010).</p> <p>Small part of southern area of site is located within an area of groundwater vulnerability and watercourse crosses site.</p>
Access considerations	No considerations identified from aerial photography.
Landowner	Tata Steel UK Limited
Aerial Photography	


Site Number	3
Area (ha)	21
Existing land use	Site consists of mixture of greenfield and existing hard standing (from aerial assessment appears to be in use for storage). Scattered trees and waterbody present within the site boundary. Railway line runs along western boundary of the site. Overhead power cables cross the north western corner of the site. Teesdale Way long distance footpath runs adjacent to the northern perimeter of the site. . This has been determined through an assessment of aerial photography only. A site visit will be required to accurately determine the current land use.
Planning policy considerations	<p>Adopted Proposals Map: Site located within policy unit</p> <p>Core Strategy: <i>CS10 Steel, Chemical and Port Related Industries:</i></p> <p>'The continued development and expansion of the chemical, steel and port industries will be supported. A total of 230 hectares of land will be safeguarded for chemical and steel manufacturing industries in line with the RSS:</p> <p>a) At Wilton International for chemical related activities;</p> <p>b) At Corus Steel Works in South Tees, Redcar and Skinningrove for steel related activities; and</p> <p>c) Along the River Tees for port related development and where it is required for future improvements to the capacity of the freight rail line, road network and terminal associated with the port.'</p> <p>Saved Local Plan Policies: Constrained by presence of the Cleveland Way and the Teesdale Way long distance footpath which runs along the northern boundary of the site. Policy T05 protects their usage. T16 also protects its use as a proposed cycle route.</p>
Ecology considerations	The presence of statutory designated sites close by requires consideration. Scattered trees and watercourse within site boundary which may have potential to support protected or notable species.
Archaeology considerations	Two Historic Environment Record Points lie within the site boundary. These are listed as West Coatham Marsh, medieval salterns.
Landscape considerations	No existing or known landscape considerations. Site is located within the Tees Lowland National Landscape Character Area
Land quality	Environmental Permitting Regulations Licenced site located directly adjacent to the northern boundary of the site. The Redcar Trunk Road Landscaping historic landfill site lies adjacent to the eastern boundary of the site.
Flood risk, hydrology & hydrogeology	<p>Site located within Strategic Flood Risk Assessment Development Allocation (SFRA) area - Majority of site not at risk from flooding. Small area of the site is at risk from a 1 in 200 year flood event from the Dabholm Gut pathway from the ditch that runs through the site. Development mitigation could include raising of lower ground. The site could still be considered for development, subject to a detailed flood risk assessment (JBA Consulting, 2010).</p> <p>Small portion of north of site within area of groundwater vulnerability. Watercourse bisects site across north eastern corner.</p>
Access considerations	Railway limits access options but access available.
Landowner	Tata Steel UK Limited
Aerial Photography	


Site Number	4
Area (ha)	5
Existing land use	Greenfield site with minor road across south western half of site. Scattered trees around site. Very small area of existing developed land – industrial use. Minor drain within southern area of site. . This has been determined through an assessment of aerial photography only. A site visit will be required to accurately determine the current land use.
Planning policy considerations	<p>Adopted Proposals Map: Site located within policy unit <i>CS10 Steel, Chemical and Port Related Industries</i>:</p> <p>'The continued development and expansion of the chemical, steel and port industries will be supported. A total of 230 hectares of land will be safeguarded for chemical and steel manufacturing industries in line with the RSS:</p> <p>a) At Wilton International for chemical related activities;</p> <p>b) At Corus Steel Works in South Tees, Redcar and Skinningrove for steel related activities; and</p> <p>c) Along the River Tees for port related development and where it is required for future improvements to the capacity of the freight rail line, road network and terminal associated with the port.'</p>
Ecology considerations	The presence of statutory designated sites close by requires consideration. Scattered trees and drain within site boundary which may have potential to support protected or notable species.
Archaeology considerations	The watercourse flowing through this site is recorded on the Historic Environment Record as a 19 th Century Mill Race. There is also a Historic Environment Record within the site boundary. This is listed as West Coatham medieval deserted settlement.
Landscape considerations	No existing or known landscape considerations. Site is located within the Tees Lowland National Landscape Character Area
Land quality	No existing considerations have been identified.
Flood risk, hydrology & hydrogeology	<p>Part of the site is within Flood Risk Zone 3a. Site located within Strategic Flood Risk Assessment Development Allocation (SFRA) area – flood depths are low and ground raising or flood resilience would provide protection. The site could still be considered for development, subject to a detailed flood risk assessment (JBA Consulting, 2010).</p> <p>Watercourse within site boundary.</p>
Access considerations	Railway restricts some access options but access available.
Landowner	Sembcorp Utilities (UK) (part of its assumed ownership)
Aerial Photography	


Site Number	5
Area (ha)	47
Existing land use	A large, mixed use site –hard standing and vegetated brownfield. Minor roads run through west south of site. River Tees runs along north-west boundary of the site. The Teesdale Way public footpath lies to the south of the site. National Grid cable crosses the south western corner of the site. A railway also lies to the south of the site. . This has been determined through an assessment of aerial photography only. A site visit will be required to accurately determine the current land use.
Planning policy considerations	<p>Adopted Proposals Map: Site located within policy unit <i>CS10 Steel, Chemical and Port Related Industries</i>:</p> <p>'The continued development and expansion of the chemical, steel and port industries will be supported. A total of 230 hectares of land will be safeguarded for chemical and steel manufacturing industries in line with the RSS:</p> <p>a) At Wilton International for chemical related activities;</p> <p>b) At Corus Steel Works in South Tees, Redcar and Skinningrove for steel related activities; and</p> <p>c) Along the River Tees for port related development and where it is required for future improvements to the capacity of the freight rail line, road network and terminal associated with the port.'</p>
Ecology considerations	The presence of statutory designated sites close by requires consideration.
Archaeology considerations	There are a large number of historic wharfs, jetties, beacons and maritime walls within and adjacent to the north of the site, recorded on the Historic Environment Record. The site is also adjacent to a soil tip, again recorded on the Historic Environment Record.
Landscape considerations	No existing or known landscape considerations. Site is located within the Tees Lowland National Landscape Character Area
Land quality	There are a number of active and historic landfill and industrial waste sites immediately to the south and east of the site.
Flood risk, hydrology & hydrogeology	Directly adjacent to Flood Risk Zone 3a. Site located within Strategic Flood Risk Assessment Development Allocation (SFRA) area and therefore the site should be suitable for development, subject to a detailed Flood Risk Assessment (JBA Consulting, 2010). The site is located within a Groundwater vulnerability zone and the north western boundary of the site lies along the edge of the River Tees. There is also a smaller watercourse running adjacent to the site boundary.
Access considerations	The River Tees along the north western boundary and the presence of the railway to the south of the site restricts access options.
Landowner	Sembcorp Utilities (UK) (part of its assumed ownership)
Aerial Photography	


Site Number	6
Area (ha)	25
Existing land use	<p>Predominantly existing industrial site with a small portion of greenfield land with scattered trees. Small waterbody present within the site. Further greenfield land lies to the east and industrial areas surround west and south. Minor roads run along the northern boundary of the site. This has been determined through an assessment of aerial photography only. A site visit will be required to accurately determine the current land use.</p> <p>This site lies directly adjacent to Site 8.</p>
Planning policy considerations	<p>Adopted Proposals Map: Site located within policy unit <i>CS10 Steel, Chemical and Port Related Industries</i>:</p> <p>'The continued development and expansion of the chemical, steel and port industries will be supported. A total of 230 hectares of land will be safeguarded for chemical and steel manufacturing industries in line with the RSS:</p> <ul style="list-style-type: none"> a) At Wilton International for chemical related activities; b) At Corus Steel Works in South Tees, Redcar and Skinningrove for steel related activities; and c) Along the River Tees for port related development and where it is required for future improvements to the capacity of the freight rail line, road network and terminal associated with the port.'
Ecology considerations	The presence of statutory designated sites close by requires consideration. Waterbody present within the site boundary and scattered trees which may have the potential to support protected or notable species.
Archaeology considerations	No known archaeological considerations.
Landscape considerations	No existing or known landscape considerations. Site is located within the Tees Lowland National Landscape Character Area
Land quality	No existing considerations have been identified.
Flood risk, hydrology & hydrogeology	The site is not located within a flood risk zone. A small portion of the western part of the site is highlighted as a Strategic Flood Risk Assessment Development Allocation (SFRA) Development area (JBA Consulting, 2010). A small waterbody is present within site boundary.
Access considerations	No obvious access considerations identified.
Landowner	Sembcorp Utilities (UK) (part of its assumed ownership)
Aerial Photography	


Site Number	7
Area (ha)	25
Existing land use	<p>The majority of the site is comprised of greenfield land (agricultural) with a small area of brownfield land present in the southern part of the site. Scattered trees, hedgerows and a watercourse are present within the site. Roads run along the northern, eastern and western boundaries of the site. Further brownfield land is located to the south. A public footpath runs along the eastern perimeter. This has been determined through an assessment of aerial photography only. A site visit will be required to accurately determine the current land use.</p> <p>This site lies directly adjacent to Site 8 and Site 9.</p>
Planning policy considerations	<p>Adopted Proposals Map: Site located within policy unit <i>CS10 Steel, Chemical and Port Related Industries</i>:</p> <p>'The continued development and expansion of the chemical, steel and port industries will be supported. A total of 230 hectares of land will be safeguarded for chemical and steel manufacturing industries in line with the RSS:</p> <p>a) At Wilton International for chemical related activities;</p> <p>b) At Corus Steel Works in South Tees, Redcar and Skinningrove for steel related activities; and</p> <p>c) Along the River Tees for port related development and where it is required for future improvements to the capacity of the freight rail line, road network and terminal associated with the port.'</p>
Ecology considerations	The presence of statutory designated sites close by requires consideration. Hedgerows and scattered trees are present within the site boundary which may have potential to support protected or notable species.
Archaeology considerations	The watercourse flowing through this site is recorded on the Historic Environment Record as a 19 th Century Mill Race.
Landscape considerations	No existing or known landscape considerations. Site is located within the Tees Lowland National Landscape Character Area
Land quality	No existing considerations have been identified.
Flood risk, hydrology & hydrogeology	<p>The site is not located within a flood risk zone.</p> <p>A small watercourse is present within site boundary.</p>
Access considerations	No obvious access considerations identified.
Landowner	Sembcorp Utilities (UK) (part of its assumed ownership)
Aerial Photography	

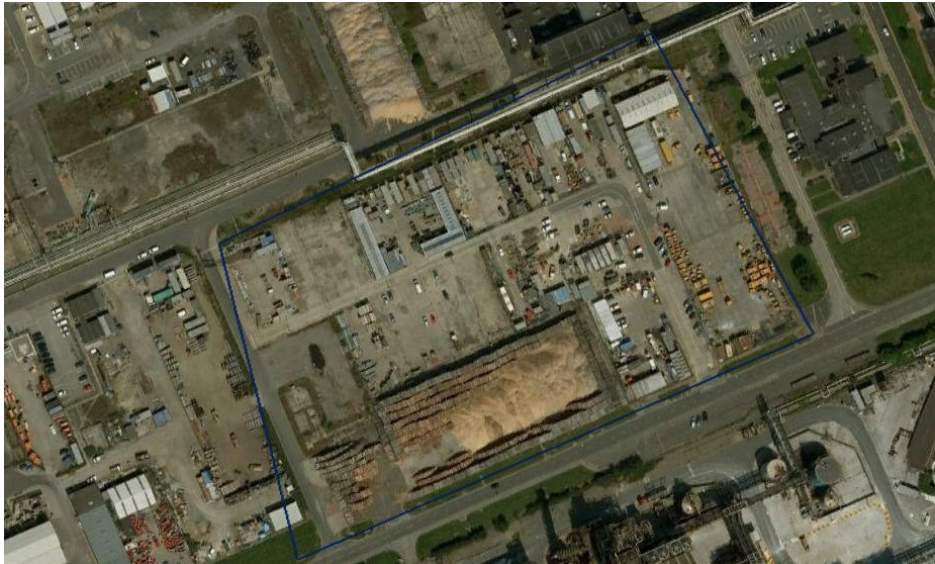
Site Number	8
Area (ha)	8
Existing land use	<p>This site is predominantly comprised of brownfield land with a small area of greenfield land with scattered trees. The site is bound by roads and other industrial areas apart from to the east which is agricultural fields. This has been determined through an assessment of aerial photography only. A site visit will be required to accurately determine the current land use. The site is located to the south of Site 7.</p> <p>A public footpath runs along the eastern perimeter.</p>
Planning policy considerations	<p>Adopted Proposals Map: Site located within policy unit <i>CS10 Steel, Chemical and Port Related Industries</i>:</p> <p>'The continued development and expansion of the chemical, steel and port industries will be supported. A total of 230 hectares of land will be safeguarded for chemical and steel manufacturing industries in line with the RSS:</p> <p>a) At Wilton International for chemical related activities;</p> <p>b) At Corus Steel Works in South Tees, Redcar and Skinningrove for steel related activities; and</p> <p>c) Along the River Tees for port related development and where it is required for future improvements to the capacity of the freight rail line, road network and terminal associated with the port.'</p>
Ecology considerations	The presence of statutory designated sites close by requires consideration. Scattered trees are present within the site boundary which may have potential to support protected or notable species.
Archaeology considerations	The watercourse flowing through this site is recorded on the Historic Environment Record as a 19 th Century Mill Race.
Landscape considerations	No existing or known landscape considerations. Site is located within the Tees Lowland National Landscape Character Area
Land quality	No known considerations exist.
Flood risk, hydrology & hydrogeology	The site is not located within a flood risk zone and is within a Strategic Flood Risk Assessment Development Allocation (SFRA) Development area (JBA Consulting, 2010).
Access considerations	No obvious access considerations identified.
Landowner	Sembcorp Utilities (UK) (part of its assumed ownership)
Aerial Photography	 <p>An aerial photograph showing an industrial site. A blue line outlines a specific area within the site, which appears to be a large open space or a specific industrial zone. The surrounding area includes various industrial buildings, roads, and some greenery.</p>


Site Number	9
Area (ha)	17
Existing land use	This site is located in the centre of an industrial area. It is a brownfield site with little vegetation present. It is bound by roads on all sides. This has been determined through an assessment of aerial photography only. A site visit will be required to accurately determine the current land use.
Planning policy considerations	<p>Adopted Proposals Map: Site located within policy unit <i>CS10 Steel, Chemical and Port Related Industries</i>:</p> <p>'The continued development and expansion of the chemical, steel and port industries will be supported. A total of 230 hectares of land will be safeguarded for chemical and steel manufacturing industries in line with the RSS:</p> <p>a) At Wilton International for chemical related activities;</p> <p>b) At Corus Steel Works in South Tees, Redcar and Skinningrove for steel related activities; and</p> <p>c) Along the River Tees for port related development and where it is required for future improvements to the capacity of the freight rail line, road network and terminal associated with the port.'</p>
Ecology considerations	The presence of statutory designated sites close by requires consideration.
Archaeology considerations	A Historic Environment Record site is located just outside the south western boundary of the site; the location of a WWII bombing decoy site. There may be potential on this site and the surrounding sites for unexploded ordnance (UXO) to be present. Therefore specialist surveys are recommended.
Landscape considerations	No existing or known landscape considerations. Site is located within the Tees Lowland National Landscape Character Area.
Land quality	An EPR licenced physical waste treatment facility lies to the north of the site.
Flood risk, hydrology & hydrogeology	The site is not located within a flood risk zone.
Access considerations	No obvious access considerations identified.
Landowner	Sembcorp Utilities (UK) (part of its assumed ownership)
Aerial Photography	


Site Number	10
Area (ha)	8
Existing land use	This site is an area of vegetated brownfield land on the edge of an industrial area. The site is bound by roads and railways. . This has been determined through an assessment of aerial photography only. A site visit will be required to accurately determine the current land use.
Planning policy considerations	<p>Adopted Proposals Map: Site located within policy unit <i>CS10 Steel, Chemical and Port Related Industries</i>:</p> <p>'The continued development and expansion of the chemical, steel and port industries will be supported. A total of 230 hectares of land will be safeguarded for chemical and steel manufacturing industries in line with the RSS:</p> <p>a) At Wilton International for chemical related activities;</p> <p>b) At Corus Steel Works in South Tees, Redcar and Skinningrove for steel related activities; and</p> <p>c) Along the River Tees for port related development and where it is required for future improvements to the capacity of the freight rail line, road network and terminal associated with the port.'</p>
Ecology considerations	The presence of statutory designated sites close by requires consideration. An area of woodland lies to the north west of the site which may have potential to support protected or notable species.
Archaeology considerations	No existing archaeological considerations.
Landscape considerations	No existing or known landscape considerations. Site is located within the Tees Lowland National Landscape Character Area
Land quality	No known considerations exist.
Flood risk, hydrology & hydrogeology	The site is not located within a flood risk zone.
Access considerations	No obvious access considerations identified.
Landowner	Sembcorp Utilities (UK) (part of its assumed ownership)
Aerial Photography	


Site Number	11
Area (ha)	4
Existing land use	The site is predominantly greenfield with areas of existing hard standing. Scattered trees are also present. The site is in the centre of the industrial area and bound by roads. . This has been determined through an assessment of aerial photography only. A site visit will be required to accurately determine the current land use.
Planning policy considerations	<p>Adopted Proposals Map: Site located within policy unit <i>CS10 Steel, Chemical and Port Related Industries</i>:</p> <p>'The continued development and expansion of the chemical, steel and port industries will be supported. A total of 230 hectares of land will be safeguarded for chemical and steel manufacturing industries in line with the RSS:</p> <p>a) At Wilton International for chemical related activities;</p> <p>b) At Corus Steel Works in South Tees, Redcar and Skinningrove for steel related activities; and</p> <p>c) Along the River Tees for port related development and where it is required for future improvements to the capacity of the freight rail line, road network and terminal associated with the port.'</p>
Ecology considerations	The presence of statutory designated sites close by requires consideration.
Archaeology considerations	No existing archaeological considerations.
Landscape considerations	No existing or known landscape considerations. Site is located within the Tees Lowland National Landscape Character Area
Land quality	Environmental Permitting Regulations licensed materials recycling treatment facility present within the site boundary.
Flood risk, hydrology & hydrogeology	The site is not located within a flood risk zone and is within a Strategic Flood Risk Assessment Development Allocation (SFRA) Development area (JBA Consulting, 2010).
Access considerations	No obvious access considerations identified.
Landowner	Sembcorp Utilities (UK) (part of its assumed ownership)
Aerial Photography	 <p>An aerial photograph showing an industrial area. A blue line outlines a specific site within the area. The site is surrounded by various industrial buildings, parking lots, and roads. The surrounding area includes larger industrial complexes and some green spaces.</p>


Site Number	12
Area (ha)	12
Existing land use	<p>The site appears to be a predominantly greenfield site however it is bisected by surface pipelines. The site is on the edge of an industrial area and a small watercourse runs along part of the southern site boundary and Mains dike is directly adjacent to the eastern boundary</p> <p>A public footpath runs along the eastern perimeter. . This has been determined through an assessment of aerial photography only. A site visit will be required to accurately determine the current land use.</p>
Planning policy considerations	<p>Adopted Proposals Map: Site located within policy unit <i>CS10 Steel, Chemical and Port Related Industries</i>:</p> <p>'The continued development and expansion of the chemical, steel and port industries will be supported. A total of 230 hectares of land will be safeguarded for chemical and steel manufacturing industries in line with the RSS:</p> <p>a) At Wilton International for chemical related activities;</p> <p>b) At Corus Steel Works in South Tees, Redcar and Skinningrove for steel related activities; and</p> <p>c) Along the River Tees for port related development and where it is required for future improvements to the capacity of the freight rail line, road network and terminal associated with the port.'</p>
Ecology considerations	The presence of statutory designated sites close by requires consideration.
Archaeology considerations	The watercourse flowing through this site is recorded on the Historic Environment Record as a 19 th Century Mill Race.
Landscape considerations	No existing or known landscape considerations. Site is located within the Tees Lowland National Landscape Character Area
Land quality	No known considerations exist.
Flood risk, hydrology & hydrogeology	The site is not located within a flood risk zone.
Access considerations	No obvious access considerations identified.
Landowner	Sembcorp Utilities (UK) (part of its assumed ownership)
Aerial Photography	 <p>An aerial photograph showing an industrial area with various buildings, pipes, and a large circular structure. A blue line outlines a specific area within the site, which is the subject of the assessment. The surrounding area includes fields and other industrial structures.</p>


Site Number	13
Area (ha)	4
Existing land use	The site is an existing industrial area comprised predominantly of hard standing and warehousing and is in the middle of an existing industrial area. The site is predominantly bound by roads. . This has been determined through an assessment of aerial photography only. A site visit will be required to accurately determine the current land use.
Planning policy considerations	<p>Adopted Proposals Map: Site located within policy unit <i>CS10 Steel, Chemical and Port Related Industries</i>:</p> <p>'The continued development and expansion of the chemical, steel and port industries will be supported. A total of 230 hectares of land will be safeguarded for chemical and steel manufacturing industries in line with the RSS:</p> <p>a) At Wilton International for chemical related activities;</p> <p>b) At Corus Steel Works in South Tees, Redcar and Skinningrove for steel related activities; and</p> <p>c) Along the River Tees for port related development and where it is required for future improvements to the capacity of the freight rail line, road network and terminal associated with the port.'</p>
Ecology considerations	The presence of statutory designated sites close by requires consideration.
Archaeology considerations	No existing archaeological considerations.
Landscape considerations	No existing or known landscape considerations. Site is located within the Tees Lowland National Landscape Character Area
Land quality	No known considerations exist.
Flood risk, hydrology & hydrogeology	The site is not located within a flood risk zone and is within a Strategic Flood Risk Assessment Development Allocation (SFRA) Development area (JBA Consulting, 2010).
Access considerations	No obvious access considerations identified.
Landowner	Sembcorp Utilities (UK) (part of its assumed ownership)
Aerial Photography	


Site Number	14
Area (ha)	4
Existing land use	The site is a mixture of existing hard standing with small areas of vegetated brownfield land. The site has a few scattered trees. The site is predominantly surrounded by industrial areas and bound by roads and an existing surface pipeline. . This has been determined through an assessment of aerial photography only. A site visit will be required to accurately determine the current land use.
Planning policy considerations	<p>Adopted Proposals Map: Site located within policy unit <i>CS10 Steel, Chemical and Port Related Industries</i>:</p> <p>'The continued development and expansion of the chemical, steel and port industries will be supported. A total of 230 hectares of land will be safeguarded for chemical and steel manufacturing industries in line with the RSS:</p> <p>a) At Wilton International for chemical related activities;</p> <p>b) At Corus Steel Works in South Tees, Redcar and Skinningrove for steel related activities; and</p> <p>c) Along the River Tees for port related development and where it is required for future improvements to the capacity of the freight rail line, road network and terminal associated with the port.'</p>
Ecology considerations	The presence of statutory designated sites close by requires consideration.
Archaeology considerations	No existing archaeological considerations.
Landscape considerations	No existing or known landscape considerations. Site is located within the Tees Lowland National Landscape Character Area
Land quality	No known considerations exist.
Flood risk, hydrology & hydrogeology	The site is not located within a flood risk zone and is within a Strategic Flood Risk Assessment Development Allocation (SFRA) Development area (JBA Consulting, 2010).
Access considerations	No obvious access considerations identified.
Landowner	Sembcorp Utilities (UK) (part of its assumed ownership)
Aerial Photography	 <p>An aerial photograph showing an industrial area. A blue rectangular boundary line is drawn around a specific plot of land. The area within the boundary appears to be a mix of paved surfaces, some vegetation, and industrial structures. Surrounding the boundary are various industrial buildings, roads, and railway tracks.</p>


Site Number	15
Area (ha)	20
Existing land use	This is a greenfield site (agricultural) with hedgerows and scattered trees present. It is on the edge of the industrial area and to the south of Site 13. The site is partially bound by roads. A treelined stretch of Mains Dike runs along the edge of the north eastern boundary. A public footpath runs along the eastern perimeter. . This has been determined through an assessment of aerial photography only. A site visit will be required to accurately determine the current land use.
Planning policy considerations	<p>Adopted Proposals Map: Site located within policy unit <i>CS10 Steel, Chemical and Port Related Industries</i>:</p> <p>'The continued development and expansion of the chemical, steel and port industries will be supported. A total of 230 hectares of land will be safeguarded for chemical and steel manufacturing industries in line with the RSS:</p> <p>a) At Wilton International for chemical related activities;</p> <p>b) At Corus Steel Works in South Tees, Redcar and Skinningrove for steel related activities; and</p> <p>c) Along the River Tees for port related development and where it is required for future improvements to the capacity of the freight rail line, road network and terminal associated with the port.'</p>
Ecology considerations	The presence of statutory designated sites close by requires consideration.
Archaeology considerations	The site of Sand Pits Farm, recorded on the Historic Environment Record is present within the site boundary. The watercourse flowing through this site is recorded on the Historic Environment Record as a 19 th Century Mill Race.
Landscape considerations	No existing or known landscape considerations. Site is located within the Tees Lowland National Landscape Character Area
Land quality	No known considerations exist.
Flood risk, hydrology & hydrogeology	The site is not located within a flood risk zone and the majority of the site is within a Strategic Flood Risk Assessment Development Allocation (SFRA) Development area (JBA Consulting, 2010).
Access considerations	Access available along the south eastern and western boundaries of the site form existing roads.
Landowner	Sembcorp Utilities (UK) (part of its assumed ownership)
Aerial Photography	


Site Number	16
Area (ha)	5
Existing land use	<p>This site is a mixture of vegetated brownfield land with grassland and scattered trees and industrial land with existing hard standing. The site is in the centre of the industrial area and bound by roads and other industrial areas. This has been determined through an assessment of aerial photography only. A site visit will be required to accurately determine the current land use.</p> <p>This site lies adjacent to site 20.</p>
Planning policy considerations	<p>Adopted Proposals Map: Site located within policy unit <i>CS10 Steel, Chemical and Port Related Industries</i>:</p> <p>'The continued development and expansion of the chemical, steel and port industries will be supported. A total of 230 hectares of land will be safeguarded for chemical and steel manufacturing industries in line with the RSS:</p> <p>a) At Wilton International for chemical related activities;</p> <p>b) At Corus Steel Works in South Tees, Redcar and Skinningrove for steel related activities; and</p> <p>c) Along the River Tees for port related development and where it is required for future improvements to the capacity of the freight rail line, road network and terminal associated with the port.'</p>
Ecology considerations	The presence of statutory designated sites close by requires consideration.
Archaeology considerations	No known archaeological considerations.
Landscape considerations	No existing or known landscape considerations. Site is located within the Tees Lowland National Landscape Character Area
Land quality	No known considerations exist.
Flood risk, hydrology & hydrogeology	The site is not located within a flood risk zone and is within a Strategic Flood Risk Assessment Development Allocation (SFRA) Development area (JBA Consulting, 2010).
Access considerations	Access available from existing roads around the south eastern and north western site boundary.
Landowner	Sembcorp Utilities (UK) (part of its assumed ownership)
Aerial Photography	 <p>An aerial photograph showing an industrial area. A blue rectangular boundary line is drawn around a central portion of the site, which contains several large industrial buildings and storage tanks. The surrounding area includes roads, parking lots, and other industrial structures.</p>


Site Number	17
Area (ha)	11
Existing land use	The site is predominantly brownfield and industrial land with a small area of vegetated land within the southern portion of the site. Industrial land lies to the east, and the site is bound on the south and west by roads. Further greenfield land lies to the south, beyond a road. This has been determined through an assessment of aerial photography only. A site visit will be required to accurately determine the current land use.
Planning policy considerations	<p>Adopted Proposals Map: Site located within policy unit <i>CS10 Steel, Chemical and Port Related Industries</i>:</p> <p>'The continued development and expansion of the chemical, steel and port industries will be supported. A total of 230 hectares of land will be safeguarded for chemical and steel manufacturing industries in line with the RSS:</p> <p>a) At Wilton International for chemical related activities;</p> <p>b) At Corus Steel Works in South Tees, Redcar and Skinningrove for steel related activities; and</p> <p>c) Along the River Tees for port related development and where it is required for future improvements to the capacity of the freight rail line, road network and terminal associated with the port.'</p>
Ecology considerations	The presence of statutory designated sites close by requires consideration. An area of woodland and a water body lie to the south of the site which may have the potential to support protected or notable species.
Archaeology considerations	No known archaeological considerations.
Landscape considerations	No existing or known landscape considerations. Site is located within the Tees Lowland National Landscape Character Area
Land quality	No known considerations exist.
Flood risk, hydrology & hydrogeology	The site is not located within a flood risk zone. A watercourse (possibly culverted) crosses the northern part of site.
Access considerations	Access available from existing roads around the south and western site boundary.
Landowner	Sembcorp Utilities (UK) (part of its assumed ownership)
Aerial Photography	

Site Number	18
Area (ha)	10
Existing land use	The site is predominantly greenfield (agricultural) with a small area of existing hard standing and buildings. Some scattered trees are present within the site boundary and a band of woodland runs from the north-east to south-west boundary. A road runs along the north-west to east boundary and further greenfield land is present to the east. A public footpath lies the east of the site. This has been determined through an assessment of aerial photography only. A site visit will be required to accurately determine the current land use.
Planning policy considerations	<p>Adopted Proposals Map: Site located within policy unit <i>CS10 Steel, Chemical and Port Related Industries</i>:</p> <p>'The continued development and expansion of the chemical, steel and port industries will be supported. A total of 230 hectares of land will be safeguarded for chemical and steel manufacturing industries in line with the RSS:</p> <p>a) At Wilton International for chemical related activities;</p> <p>b) At Corus Steel Works in South Tees, Redcar and Skinningrove for steel related activities; and</p> <p>c) Along the River Tees for port related development and where it is required for future improvements to the capacity of the freight rail line, road network and terminal associated with the port.'</p>
Ecology considerations	The presence of statutory designated sites close by requires consideration. A band of deciduous woodland runs along part of the site boundary and some scattered trees are present within the boundary. These habitats may have potential to support protected or notable species. There are great crested newt records within 500m of the site boundary.
Archaeology considerations	No known archaeological considerations.
Landscape considerations	No existing or known landscape considerations. Site is located within the Tees Lowland National Landscape Character Area
Land quality	No known considerations exist.
Flood risk, hydrology & hydrogeology	The site is not located within a flood risk zone and is within a Strategic Flood Risk Assessment Development Allocation (SFRA) Development area (JBA Consulting, 2010). A watercourse lies adjacent to the east of the site.
Access considerations	The woodland band and wider greenfield land limit access; however there is existing access into the site from the road running along the north-west to east boundary.
Landowner	Sembcorp Utilities (UK) (part of its assumed ownership)
Aerial Photography	

Site Number	19
Area (ha)	25
Existing land use	This site is predominantly existing industrial land and hard standing with some areas of greenfield land. Hedgerows and scattered trees are present. The site is surrounded by further greenfield land, roads and other industrial areas. This has been determined through an assessment of aerial photography only. A site visit will be required to accurately determine the current land use. Site 17, 21 and 22 are adjacent to this site.
Planning policy considerations	Adopted Proposals Map: Site located within policy unit <i>CS10 Steel, Chemical and Port Related Industries</i> : 'The continued development and expansion of the chemical, steel and port industries will be supported. A total of 230 hectares of land will be safeguarded for chemical and steel manufacturing industries in line with the RSS: a) At Wilton International for chemical related activities; b) At Corus Steel Works in South Tees, Redcar and Skinningrove for steel related activities; and c) Along the River Tees for port related development and where it is required for future improvements to the capacity of the freight rail line, road network and terminal associated with the port.'
Ecology considerations	The presence of statutory designated sites close by requires consideration. Hedgerows and scattered trees are present within the site boundary which may have potential to support protected or notable species.
Archaeology considerations	No known archaeological considerations.
Landscape considerations	No existing or known landscape considerations. Site is located within the Tees Lowland National Landscape Character Area
Land quality	The existing Teesside Power Station is close to the western boundary of the site.
Flood risk, hydrology & hydrogeology	The site is not located within a flood risk zone and is within a Strategic Flood Risk Assessment Development Allocation (SFRA) Development area (JBA Consulting, 2010). A number of watercourses cross the site, some of which may be culverted.
Access considerations	Existing access is available from the roads that partially encircle the site.
Landowner	Sembcorp Utilities (UK) (part of its assumed ownership)
Aerial Photography	 An aerial photograph showing an industrial site. A blue line outlines a large rectangular area within the site, which appears to be a mix of industrial buildings, paved areas, and some green spaces. The surrounding area includes other industrial facilities, roads, and fields.

Site Number	20
Area (ha)	16
Existing land use	<p>This is a greenfield site with some scattered trees. It is currently under agricultural production. A band of deciduous woodland is directly adjacent to the eastern corner of the site. The site is predominantly surrounded by further greenfield land. A road runs along the north western boundary of the site and part of the north eastern boundary. Wilton Primary School lies within the residential area to the south of the site. This has been determined through an assessment of aerial photography only. A site visit will be required to accurately determine the current land use.</p> <p>Site 20 is adjacent to this site.</p>
Planning policy considerations	<p>Adopted Proposals Map: Site located within policy unit <i>CS10 Steel, Chemical and Port Related Industries</i>:</p> <p>'The continued development and expansion of the chemical, steel and port industries will be supported. A total of 230 hectares of land will be safeguarded for chemical and steel manufacturing industries in line with the RSS:</p> <ul style="list-style-type: none"> a) At Wilton International for chemical related activities; b) At Corus Steel Works in South Tees, Redcar and Skinningrove for steel related activities; and c) Along the River Tees for port related development and where it is required for future improvements to the capacity of the freight rail line, road network and terminal associated with the port.'
Ecology considerations	The presence of statutory designated sites close by requires consideration. Scattered trees are present within the site boundary; larger areas of woodland lie adjacent to the eastern corner of the site. The habitats may have potential to support protected or notable species and there is a record of a great crested newt within 500m of the site boundary.
Archaeology considerations	No known archaeological considerations.
Landscape considerations	No existing or known landscape considerations. Site is located within the Tees Lowland National Landscape Character Area
Land quality	There are a number of active landfill sites to the south and east of the site; however the permit status of these sites is closure.
Flood risk, hydrology & hydrogeology	The site is not located within a flood risk zone and is within a Strategic Flood Risk Assessment Development Allocation (SFRA) Development area (JBA Consulting, 2010). A drain is present in the northern part of the site.
Access considerations	Existing access is available from the road that runs along the north western boundary of the site. The presence of the woodland band and further greenfield land limit access options.
Landowner	Sembcorp Utilities (UK) (part of its assumed ownership)
Aerial Photography	

Site Number	21
Area (ha)	18
Existing land use	This is a greenfield site (agricultural) with hedgerows and drains. Existing pylon and overhead power cables cross the site. It is located on the edge of the industrial area. A hedgerow partially encircles half of the site. Further greenfield land lies beyond the majority of the site boundary. This has been determined through an assessment of aerial photography only. A site visit will be required to accurately determine the current land use.
Planning policy considerations	<p>Adopted Proposals Map: Site located within policy unit <i>CS10 Steel, Chemical and Port Related Industries</i>:</p> <p>'The continued development and expansion of the chemical, steel and port industries will be supported. A total of 230 hectares of land will be safeguarded for chemical and steel manufacturing industries in line with the RSS:</p> <p>a) At Wilton International for chemical related activities;</p> <p>b) At Corus Steel Works in South Tees, Redcar and Skinningrove for steel related activities; and</p> <p>c) Along the River Tees for port related development and where it is required for future improvements to the capacity of the freight rail line, road network and terminal associated with the port.'</p>
Ecology considerations	The presence of statutory designated sites close by requires consideration. Lengths of hedgerow are present within the site boundary which may have the potential to support protected or notable species. There are existing records of water voles within the vicinity of the site.
Archaeology considerations	No known archaeological considerations.
Landscape considerations	No existing or known landscape considerations. Site is located within the Tees Lowland National Landscape Character Area
Land quality	There are a number of active landfill sites to the south and east of the site; however the permit status of these sites is closure. To the north of the site lies Teesside Power Station which is an EPR licensed site.
Flood risk, hydrology & hydrogeology	<p>The site is not located within a flood risk zone and is within a Strategic Flood Risk Assessment Development Allocation (SFRA) Development area (JBA Consulting, 2010).</p> <p>Drains are present within the site boundary, some of which may be culverted.</p>
Access considerations	A hedgerow partially encircles the boundary of the site with existing gated access. Access available from industrial area and existing farm access is available within the hedgerow.
Landowner	Sembcorp Utilities (UK) (part of its assumed ownership)
Aerial Photography	

Site Number	22
Area (ha)	19
Existing land use	This is a greenfield site (agricultural) bisected by hedgerows. A band of recently planted woodland/hedgerow runs along the western edge of the site. Greenfield land exists beyond the site boundary, along with the Lackenby substation. A wide hedgerow runs along the majority of the eastern site boundary with the A1053 beyond. Existing pylons, overhead power lines and buried cables cross the site. A footpath runs along the western perimeter of the site. This has been determined through an assessment of aerial photography only. A site visit will be required to accurately determine the current land use.
Planning policy considerations	<p>Adopted Proposals Map: Site within the following policy units:</p> <p>- CS22 Protecting and Enhancing the Borough's Landscape:</p> <p>"The overall approach will be to protect and enhance the Borough's landscape based on the character areas identified through the Landscape Character Assessment. Priority will be given to the protection and enhancement of the landscape character and natural beauty of the North Yorkshire and Cleveland Heritage Coast.</p> <p>Development will not be allowed if this would lead to the loss of features important to the character of the landscape unless the need for the development outweighs the landscape considerations. Where development is justified, proposals will include measures to enhance, restore or create the special features of the landscape. In such circumstances, priority will be given to the creation of habitats to support local and regional biodiversity targets and the planting of new hedgerows, trees and woodlands to support the Tees Forest Strategy will be encouraged."</p> <p>- CS9 Protecting Existing Employment Areas:</p> <p>Land and buildings within existing business parks and industrial estates will continue to be developed and safeguarded for business and general industry. Proposals will be encouraged to improve the quality of the environment, signage, security and accessibility of the sites. Existing employment sites and buildings located outside the employment areas will be safeguarded where they are important to sustaining the local economy and meeting the Council's regeneration objectives.</p> <p>The site also directly abuts policy unit CS23 Green Infrastructure green areas will be protected and, where appropriate, enhanced to improve their quality, value, multi-functionality and accessibility.</p>
Ecology considerations	The presence of statutory designated sites close by requires consideration. Hedgerows present within site boundary and adjacent to site which may have potential to support protected or notable species.
Archaeology considerations	Historic Environment Record (HER) Point present in north and south of the site. The record in the north is of Old Hall Farm and pottery scatterings. The HER in the south refers to a medieval village. The site is also located within the 100m buffer of a Listed Building.
Landscape considerations	No existing or known landscape considerations. Site is located within the Tees Lowland National Landscape Character Area.
Land quality	There are no known existing considerations.
Flood risk, hydrology & hydrogeology	<p>The site is not located within a Flood Risk Zone and is within a Strategic Flood Risk Assessment Development Allocation (SFRA) Development area (JBA Consulting, 2010).</p> <p>Part of southern area of the site is located within a groundwater vulnerability area.</p>
Access considerations	Access constrained by existing substation and greenfield land. Existing access present from the A1053.
Landowner	Sembcorp Utilities (UK) (part of its assumed ownership)
Aerial Photography	

7 SUMMARY

7.1 Site Summary Table 7.1

Site Number	Site Area (ha)	Combined Site Area (ha)	Existing Land Use	Distance* to substation (km)		Distance* and direction to the edge of the industrial site (km)		SFRA Area?	Vehicle Access
				Tod Point	Lackneby				
1	10	n/a	Greenfield	0.72	5.1	Adjacent		No	Minor road adjacent to southern boundary
2	24	n/a	Greenfield	0.74	5.22	Adjacent		Partially within zone 3a	Minor roads on all sides
3	21	n/a	Greenfield / Hardstanding	0.53	4	0.76 (E)		Partially within 1 in 200 year risk	A1085 adjacent to eastern boundary
4	5	63 (combined with sites 6, 7 & 8)	Greenfield / Small area of industrial	0.63	4.23	Adjacent		Partially within zone 3a. Development allocation	Minor roads to south and east
5	47	n/a	Greenfield / Hardstanding / Brownfield	4.25	3.93	4.5 (SW)	5 (E)	Development Allocation	Smith's Dock Road adjacent to western boundary
6	25	63 (combined with sites 6, 7 & 8)	Industrial / Small area of greenfield	1.25	3.6	Adjacent		Partially within Development Allocation	Minor roads to north, south and east
7	25	63 (combined with sites 4, 6 & 8)	Greenfield / Small area of brownfield	1.31	3.75	Adjacent		No	Boundary Roads North and East

*Distances are approximate and from centre of site

Site Number	Site Area (ha)	Combined Site Area (ha)	Existing Land Use	Distance* to substation (km)		Distance* and direction to the edge of the industrial site (km)		SFRA Area?	Vehicle Access
				Tod Point	Lackneby				
8	8	63 (combined with sites 4, 6 & 7)	Brownfield / Small area of greenfield	1.85	3.42	Adjacent		Development Allocation	Boundary Road East and Eastway adjacent to southern boundary
9	17	n/a	Brownfield / Industrial	2	2.8	1.05 (E)		No	Minor Road adjacent to north, east and west
10	10	n/a	Brownfield / Greenfield	2.6	2	0.88 (SW)	1.86 (SE)	No	Minor roads on all sides
11	4	n/a	Greenfield / Hardstanding	2.27	2.33	1.60 (E)	1.50 (S)	Development Allocation	Minor road adjacent to eastern boundary
12	12	42(combined with sites 15 & 18)	Greenfield / Pipelines	2.62	3.18	Adjacent		No	Minor roads to north and west boundary
13	4	n/a	Industrial	2.58	2.08	1.66 (E)	0.90 (S)	Development Allocation	Minor roads on all sides
14	4	n/a	Hardstanding / Small areas of greenfield	2.59	2.6	7.9 (E)	1.18 (S)	Development Allocation	Minor roads to north, south and west
15	20	42(combined with sites 12 & 18)	Greenfield	3	3.03	Adjacent		Partially within Development Allocation	Minor roads on south eastern and western boundary
16	5	n/a	Greenfield / Industrial / Hardstanding	2.9	1.72	0.63 (S)	1.81 (E)	Development Allocation	Minor roads on south eastern and north western boundary

*Distances are approximate and from centre of site

Site Number	Site Area (ha)	Combined Site Area (ha)	Existing Land Use	Distance* to substation (km)		Distance* and direction to the edge of the industrial site (km)		SFRA Area?	Vehicle Access
				Tod Point	Lackneby				
17	11	n/a	Brownfield / Small area of Greenfield	3	2.13	0.35 (SE)	0.56 (E)	No	Minor roads on southern and western boundary
18	10	42(combined with sites 12 & 15)	Greenfield / Small area of hardstanding	3.29	2.85	Adjacent		Development Allocation	Minor road along northern boundary
19	25	n/a	Industrial / Hardstanding / Small areas of greenfield	3.2	1.53	Adjacent		Development Allocation	Minor roads to north south and east
20	16	34(combined with site 21)	Greenfield	3.53	1.66	Adjacent		Development Allocation	Minor road along northern boundary
21	18	34(combined with site 20)	Greenfield	3.75	0.83	Adjacent		Development Allocation	Minor road to south east and north
22	19	n/a	Greenfield	4.2	Adjacent	Adjacent		Development Allocation	From A1053 to the east

7.2 Recommendations and Further Studies

Further Studies:

- Land Agents and Ownership/ existing land use
- Land Quality/ Contaminated Land
- Flood Risk consultation with EA
- Utilities data
- Planning Policy
- Further in depth review of other ESs
- UXO studies are required
- Base mapping – need 50k and 25k and 10k over larger area.

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